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Kata Alu-aluan

Pengarah
Institut Pendidikan Guru Malaysia Kampus Batu Lintang

Assalamualaikum Warahmatullahi Wabarakatuh dan salam sejahtera,

Setinggi-tinggi kesyukuran dipanjatkan ke hadrat Ilahi kerana dengan limpah dan kurnia-Nya, Jurnal Penyelidikan IPGKBL Jilid 20 Tahun 2023 akhirnya berjaya diterbitkan. Usaha murni penerbitan jurnal utama IPGMKBL ini adalah selari dengan *Key Performance Indicator* (KPI) Transformasi IPG (2016-2025) seperti yang telah ditetapkan dalam Kluster 3: Pembudayaan Penyelidikan dan Inovasi.

Saya juga ingin mengambil kesempatan ini untuk merakamkan setinggi-tinggi penghargaan kepada semua penulis yang telah menghantar manuskrip ke jurnal ini. Tanpa sokongan daripada anda semua, jurnal ini tidak mungkin dapat diterbitkan. Jutaan terima kasih juga ditujukan kepada para penilai luar, sidang penyunting dan Jabatan Perancangan, Penyelidikan dan Inovasi IPGMKBL yang begitu komited dalam melaksanakan peranan masing-masing bagi meningkatkan kualiti jurnal ini. Semoga artikel-artikel ilmiah yang berjaya diterbitkan dalam jurnal ini dapat dijadikan sumber rujukan berkualiti kepada para pendidik khususnya dan orang ramai amnya.

Adalah menjadi harapan saya agar semua pensyarah IPGMKBL dan para pendidik di luar terus menghantar manuskrip untuk dipertimbangkan penerbitannya dalam jurnal ini. Ini kerana selain tugas hakiki dalam pengajaran dan pembelajaran, adalah menjadi tanggungjawab seorang pensyarah IPGM dan pendidik untuk meningkatkan kualiti kesarjanaannya melalui penglibatan aktif dalam melaksanakan penyelidikan dan penerbitan yang berkualiti.

Sekian, terima kasih.

DR. ABANG ISMAIL BIN HAJI ABANG JULHI
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DARI MEJA KETUA PENYUNTING

Jurnal Penyelidikan IPGKBL Jilid 20 Tahun 2023 terdiri daripada lapan artikel yang merentasi beberapa bidang pendidikan dan reka bentuk kajian. Secara ringkasnya, intipati kandungan untuk setiap artikel adalah seperti berikut:

Artikel pertama "**Pelaksanaan Pentaksiran Bilik Darjah (PBD) Di Sekolah: Suatu Cabaran"** menilai tahap kesediaan guru dalam melaksanakan PBD serta menilai tahap sokongan yang telah diterima oleh guru-guru dalam melaksanakan PBD di sekolah. Di samping itu, kajian ini juga meninjau masalah yang dihadapi oleh guru-guru dalam melaksanakan PBD di sekolah.

Artikel kedua ***"Integrating Minecraft With The 5E Instructional Model in Teaching Fractions: An Investigation of Pupils' Problem-Solving Skills"*** bertujuan mengenal pasti keberkesanan pengintegrasian Minecraft dengan Model Pengajaran 5E dalam meningkatkan kemahiran menyelesaian masalah untuk Topik Pecahan.

Artikel ketiga "***Google Classroom: Learning Tools for PDPP Interim Teachers***" meninjau persepsi guru interim PDPP terhadap penggunaan *Google Classroom*. Pada masa yang sama, kesignifikanan perbezaan persepsi terhadap penggunaan *Google Classroom* mengikut jantina dan lokasi turut dikaji.

Artikel keempat "**Persepsi Guru Pelatih Terhadap Kursus Keupayaan Kewangan"** yang bertujuan meninjau kesedaran guru pelatih terhadap pelbagai aspek kewangan setelah mengikuti kursus Keupayaan Kewangan KKWK3013.

Artikel kelima "**Tahap Penguasaan Kemahiran Insaniah Pelajar Keluaran IPG Kampus Batu Lintang Bagi PISMP Ambilan Jun 2015 Dan Jun 2016**" meninjau tahap penguasaan kemahiran insaniah guru novis yang telah ditempatkan selama 1-2 tahun di sekolah.

Artikel keenam "***Utilizing The School Resource Centre For Students' Information Literacy Skills Development*"** merupakan kertas konseptual yang menghubungkaitkan *Big6 Information Literacy Model* dengan kepentingan pusat sumber sekolah untuk meningkatkan kemahiran literasi maklumat murid-murid.

Artikel ketujuh "**Sistem Ejaan Bahasa Bidayuh Bau"** membincangkan pembinaan sistem ejaan bahasa Bidayuh Bau secara terperinci.

Artikel kelapan "***Utilising Game-Based Learning in Speaking Lessons to Enhance ESL Secondary School Learners' Vocabulary, Motivation and Learning Environment*"** mengkaji bagaimana *Game-Based Learning* dapat meningkatkan perbendaharaan kata, motivasi dan persekitaran pembelajaran dalam kalangan pelajar ESL.

Akhir kata, saya ingin mengambil kesempatan ini untuk merakamkan setinggi-tinggi penghargaan dan terima kasih kepada semua penulis artikel. Semoga perkongsian ilmiah artikel-artikel ini dapat dijadikan sumber rujukan warga pendidik ke arah meningkatkan mutu pendidikan dan membantu dalam menambahbaik amalan pengajaran dan pembelajaran. Saya juga amat berterima kasih kepada para penilai dan penyunting yang begitu komited dalam menyempurnakan tugas pengulasan dan penyuntingan sehingga menjayakan penerbitan jurnal ini.

Sekian, terima kasih.

KANDUNGAN

PELAKSANAAN PENTAKSIRAN BILIK DARJAH (PBD) DI SEKOLAH: SUATU CABARAN

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ABSTRAK

Kajian ini dijalankan untuk menilai tahap kesediaan guru dalam melaksanakan Pentaksiran Bilik Darjah (PBD) serta menilai tahap sokongan yang telah diterima oleh guru-guru dalam melaksanakan PBD di sekolah. Kajian tersebut juga bertujuan untuk menentukan masalah yang dihadapi oleh guru-guru dalam melaksanakan PBD di sekolah. Kajian dilaksanakan secara tinjauan berdasarkan persepsi guru-guru yang mengajar di sekolah rendah, dengan menggunakan soal selidik. Seramai 50 orang responden kajian yang terdiri daripada guru-guru yang sedang berkhidmat di sekolah rendah di daerah Kanowit, Sarawak. Hasil analisis data secara keseluruhannya menunjukkan guru mempunyai kesediaan yang amat baik dalam melaksanakan PBD di sekolah, dengan skor min 4.19. Ujian-t menunjukkan tidak ada perbezaan min berdasarkan jantina guru, iaitu Ujian *Levene's* $p=0.554$, $p>0.05$, adalah homogenous. Nilai t (28, $p=0.493$) = 0.690, $p>0.05$ tidak signifikan. Ini menggambarkan perbezaan min antara guru lelaki dan guru perempuan adalah tidak signifikan. Ujian ANOVA Satu Hala digunakan untuk menentukan perbezaan min berdasarkan pengalaman mengajar. Hasil Ujian ANOVA Satu Hala mendapati bahawa terdapat perbezaan min yang signifikan dalam sokongan kepada guru berdasarkan pengalaman mengajar mereka. Nilai F (2, $p=0.009$) =5.24, $p<0.05$ adalah signifikan. Analisis *post-hoc* memperincikan perbandingan antara kumpulan pengalaman, menggunakan ujian LSD dan menunjukkan bahawa terdapat perbezaan min yang signifikan antara 3 kumpulan pengalaman mengajar. Kajian mendapati bahawa terdapat skor min yang sangat rendah dalam beberapa item, dan ini menunjukkan bahawa guru-guru masih bermasalah dalam melaksanakan PBD dengan tepat, kurang mahir membuat penilaian terhadap sesuatu kemahiran, bermasalah memberi gred pencapaian murid dan bermasalah untuk menyediakan instrumen yang standard, yang mempunyai kesahan dan kebolehpercayaan yang tinggi. Guru masih memerlukan bimbingan pakar dalam membuat pengredan pencapaian murid. Implikasi kajian ialah dapat memberi informasi tentang tahap kemahiran guru-guru dalam membuat pentaksiran yang telus.

Kata Kunci: Pentaksiran bilik darjah, kesediaan, sokongan, persepsi guru

ABSTRACT

This study was carried out to assess the level of teacher readiness in implementing Classroom Assessment (CBA) as well as to assess the level of support received by teachers in implementing CBA in schools. The study also aims to determine the problems faced by teachers in implementing PBD in schools. The study was carried out as a survey based on the perceptions of teachers who teach in primary schools, using questionnaires. A total of 50 respondents of the study consisting of teachers currently serving in primary schools in Kanowit district, Sarawak. The results of data analysis as a whole show that teachers have a very good willingness to implement PBD in schools, with a mean score of 4.19. The t-test shows that there is no mean difference based on

the teacher's gender, that is, Levene's Test p=0.554, p>0.05, is homogeneous. The t value (28, p=0.493) = 0.690, p>0.05 is not significant. This shows that the mean difference between male and female teachers is not significant. A One-Way ANOVA test was used to determine mean differences based on teaching experience. One-way ANOVA test results found that there was a significant mean difference in support for teachers based on their teaching experience. The value of F(2, p=0.009) =5.240, p<0.05 is significant. Post-hoc analysis detailed comparisons between experience groups, using the LSD test and showed that there was a significant mean difference between the 3 teaching experience groups. The study found that there is a very low mean score in several items, and this shows that teachers still have problems in implementing PBD accurately, are less skilled in making assessments of certain skills, have problems in grading student achievement and have problems in providing standardized instruments, which has high validity and reliability. Teachers still need expert guidance in grading student achievement. The implication of the study is to be able to provide information about the level of teachers' skills in making transparent assessments.

Keywords: *Classroom assessment, readiness, support, teacher perception*

PENGENALAN

Senario sistem pentaksiran di Malaysia masa kini telah berfokus kepada suatu bentuk pentaksiran yang berterusan dalam sesi pengajaran dan pembelajaran (PdP), iaitu Pentaksiran Bilik Darjah (PBD) bagi mendapatkan maklumat tentang perkembangan, kemajuan, kebolehan dan pencapaian murid. PBD ini sebenarnya bukan sesuatu yang asing bagi warga pendidik kerana telahpun diperkenalkan pada tahun 2011, yang dikenali sebagai Pentaksiran Sekolah (PS), dan mulai tahun 2016, telah dinamakan sebagai PBD. Meskipun pentaksiran dalam PS adalah suatu pentaksiran yang bersifat holistik, manakala dalam PBD pentaksirannya adalah secara berterusan sepanjang proses PdP, bagi semua mata pelajaran, namun matlamatnya adalah sama, iaitu untuk melihat kemajuan murid-murid dalam pembelajaran mereka. Pelaksanaan PBD adalah secara formatif dan sumatif; untuk pembelajaran, sebagai pembelajaran dan tentang pembelajaran. Pentaksiran merupakan proses berterusan dalam PdP, yang merangkumi aktiviti merancang, membina instrumen, pengumpulan maklumat, melaksanakan penilaian, penginterpretasian, perekodan dan pelaporan maklumat mengenai prestasi pelajar untuk membantu guru membuat keputusan (Boon et al., 2017).

Pelaksanaan PBD yang berkualiti dapat mencerminkan tahap pencapaian sebenar murid dalam menguasai matlamat yang ditetapkan dalam kurikulum (Kementerian Pendidikan Malaysia [KPM], 2019). Pelaksanaan PBD membantu guru mengesan perkembangan murid secara menyeluruh; mengenal pasti kekuatan dan kelemahan murid dalam pembelajaran; mengetahui keberkesanan pengajaran; merancang dan mengubah suai kaedah pengajaran seterusnya mengambil tindakan susulan dengan serta merta berdasarkan tahap pencapaian yang diperoleh oleh setiap murid. Halimah dan Rozinah (2019) telah menyatakan bahawa PBD bukan semata-mata untuk menilai perbandingan pencapaian murid tetapi juga untuk membantu murid meningkatkan prestasi akademik secara umumnya. Walaupun pada dasarnya proses pelaksanaan PBD di sekolah begitu terancang, namun pada hakikatnya pelaksanaan PBD ini penuh dengan cabarannya. Ketelusan dan keberkesanan PBD dalam mentaksir tahap perkembangan murid-murid masih lagi dipersoalkan. Untuk menepis tanggapan tersebut, tahap kesediaan guru-guru dalam melaksanakan PBD haruslah sentiasa mantap dan mampu membuat pertimbangan yang profesional dalam membuat pentaksiran, agar kesahan dan kebolehpercayaan pentaksiran mereka tidak dipersoalkan.

PERMASALAHAN KAJIAN

Sejak PBD dilaksanakan dalam sistem pendidikan di Malaysia pada tahun 2016, pelbagai permasalahan yang berkaitan dengan pentaksiran dibangkitkan oleh warga pendidik. Ravikumar Varatharaj (2015) berpendapat bahawa masih terdapat ruang penambahbaikan dalam kalangan guru untuk melaksanakan pentaksiran. Kemungkinan ketidaktelusan pentaksiran oleh guru-guru terhadap

murid-murid mereka menjadi suatu kebimbangan bagi para ibu bapa. Kajian Suzana Abd Mutalib dan Jamil Ahmad (2012) pula mendapati guru gagal memantau pembelajaran murid atas faktor kekurangan pengetahuan, penghasilan keputusan yang tidak adil dan kelemahan perancangan pengajaran sehingga gagal mencungkil potensi sebenar murid dan mengakibatkan pelaporan prestasi murid yang tidak tepat. Oleh itu, kajian ini amat perlu dilaksanakan bagi menilai tahap kesediaan guru dan tahap sokongan yang diterima oleh guru dalam melaksanakan PBD di sekolah.

OBJEKTIF KAJIAN

Kajian ini dilaksanakan untuk:

a. Menentukan tahap kesediaan guru dalam melaksanakan PBD di sekolah.
b. Menentukan tahap sokongan terhadap guru dalam melaksanakan PBD di sekolah.
c. Menentukan cabaran yang dihadapi oleh guru dalam melaksanakan PBD di sekolah.

PERSOALAN KAJIAN

Persoalan kajian yang dirungkai dalam kajian ini ialah:

a. Apakah tahap kesediaan guru dalam melaksanakan PBD di sekolah?
b. Apakah tahap sokongan yang diterima oleh guru dalam melaksanakan PBD di sekolah?
c. Apakah cabaran yang dihadapi oleh guru dalam melaksanakan PBD di sekolah?
d. Adakah terdapat perbezaan yang signifikan kesediaan guru dalam melaksanakan PBD berdasarkan jantina?
e. Adakah terdapat perbezaan yang signifikan tahap sokongan terhadap guru berdasarkan pengalaman bekerja?
f. Adakah terdapat perbezaan yang signifikan tahap cabaran yang dihadapi oleh guru berdasarkan pengalaman bekerja?

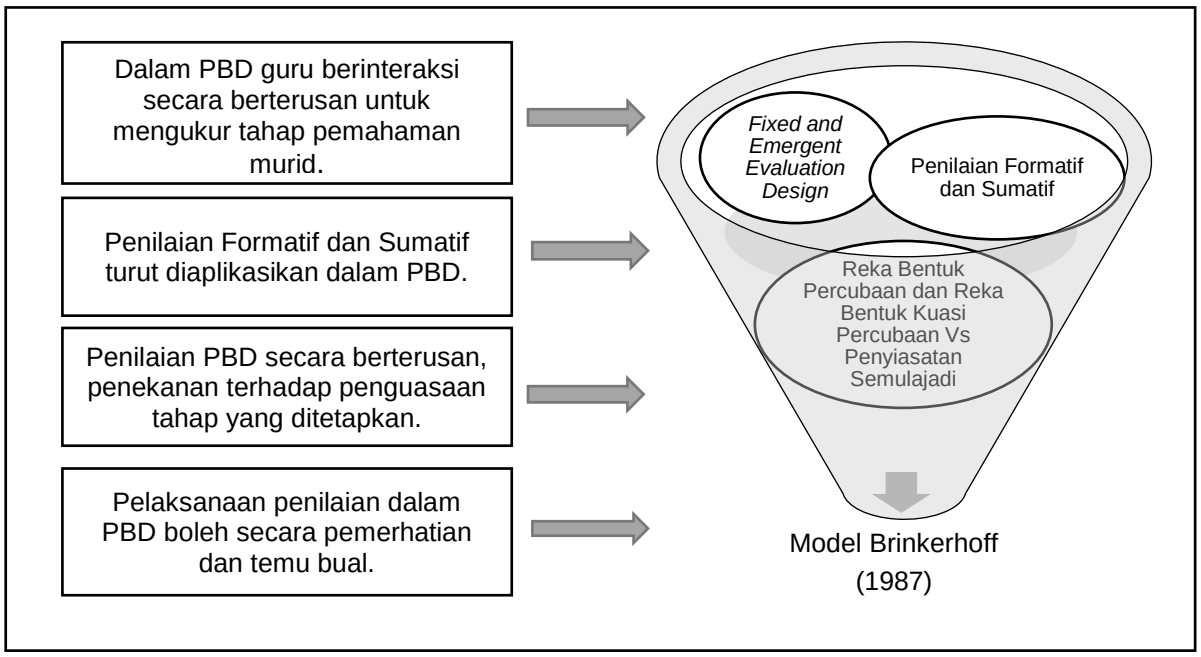
HIPOTESIS KAJIAN

Ho1 : Tidak terdapat perbezaan skor min yang signifikan tahap kesediaan guru melaksanakan PBD berdasarkan jantina guru.
Ho2 : Tidak terdapat perbezaan skor min yang signifikan tahap kesediaan guru melaksanakan PBD berdasarkan pengalaman mengajar.

TINJAUAN LITERATUR

Kajian ini berasaskan Model Brinkenhoff (1987) yang telah mengemukakan tiga jenis penilaian yang berkesan, iaitu *Fixed and Emergent Evaluation Design*, *Formative vs Sumative Evaluation* dan Reka Bentuk Percubaan dan Reka Bentuk Kuasi Percubaan Vs Penyiasatan Semulajadi. Bentuk-bentuk penilaian ini amat bersesuaian dengan PBD, misalnya dalam *Fixed and Emergent Evaluation Design,* di sepanjang penilaian ini dilakukan, penilai perlu berinteraksi secara berterusan untuk mendapatkan data, agar maklumat yang dikumpul tidak terputus dan tetap teguh, dengan menggunakan teknik pemerhatian dan seumpamanya. Dalam PBD, teknik penilaian sebegini turut diamalkan dalam membuat pentaksiran. Untuk penilaian secara *Formative vs Sumative Evaluation,* PBD juga menggunakan cara penilaian yang sama. Penilaian secara Reka Bentuk Percubaan dan Reka Bentuk Kuasi Percubaan Vs Penyiasatan Semulajadi turut selari dengan penilaian PBD kerana penilaian ini dilaksanakan secara berterusan, penekanan kepada perlakuan dan mengukur impak sesuatu aktiviti, yang selari dengan penekanan terhadap penguasaan tahap-tahap penguasaan yang telah ditetapkan dalam PBD sereta dilaksanakan secara pemerhatian atau temu bual. Rajah 1 di bawah menunjukkan persamaan berkenaan.

Rajah 1
Persamaan PBD dengan Model Brinkerhoff (1987)



Kajian Siti Hayati Mohd Yusoff dan Lee (2018) mendapati setiap guru memiliki kaedah yang tersendiri untuk menganalisis muridnya. Sesetengah guru menganalisis murid melalui pemerhatian, dan terdapat juga guru yang menganalisis murid sebelum atau sepanjang proses pembelajaran dan pemudahcaraan dijalankan di dalam bilik darjah. Menurut Guskey dan Jung (2013), guru seharusnya mempunyai kemahiran dalam menentukan teknik dan instrumen pentaksiran yang pelbagai dan sesuai dengan isi kandungan dan objektif pembelajaran. Kajian Ahmad dan Mahamod (2016) mendapati bahawa pelaksanaan pentaksiran dalam sekolah belum mencapai matlamat sepenuhnya. Wan Omar (2019) juga melanjutkan kajian dengan merumuskan bahawa banyak cabaran yang dihadapi oleh guru dalam melaksanakan PBD sehingga menimbulkan masalah kepada guru dalam menjalankan PBD dengan berkesan. Lantaran itu, Ahmad dan Mahamod (2016) mencadangkan supaya kajian berkaitan dengan PBD diperbanyakkan memandangkan PBS merupakan satu transformasi yang masih baharu di Malaysia. PBD dijalankan sebagai teras utama dalam memperbaiki kelemahan dalam sistem pendidikan (Zhang et al., 2019).

METODOLOGI KAJIAN

Kajian ini bersifat kuantitatif dan dilaksanakan dengan kaedah tinjauan. Kajian berbentuk tinjauan ini dilaksanakan di sekolah-sekolah rendah daerah Kanowit, Sarawak. Penyelidikan yang menggunakan data statistik sebagai alat untuk menerang dan menganalisis penyelidikan dapat mengurangkan masa dan sumber penyelidik. Data yang dipungut dalam kawasan tertentu dengan kadar yang banyak boleh digeneralisasikan bagi mencerminkan masyarakat yang luas (Eyisi Daniel, 2016). Instrumen yang digunakan dalam kajian ini ialah soal selidik. Responden kajian pula ialah seramai 50 orang responden, yang terdiri daripada guru-guru yang sedang berkhidmat di sekolah rendah di daerah Kanowit, Sarawak. Menurut Mohamad Nor (2000), prinsip pengumpulan data yang perlu diutamakan untuk menentukan pengutipan data soal selidik yang sah ialah maklumat yang boleh dipercayai, maklumat daripada punca yang sah, maklumat yang relevan, dan data dapat dianalisis dengan statistik. Dalam kajian ini, soal selidik diedarkan kepada responden-responden yang relevan, dan berada di sekolah rendah di daerah Kanowit, Sarawak. Soal selidik telah diedarkan ke 12 buah sekolah rendah yang terpilih, di daerah Kanowit, Sarawak. Data soal selidik dalam kajian ini dianalisis menggunakan kaedah kuantitatif, diproses dan diuji kesignifikanannya menggunakan perisian *Statistical Package for the Social Sciences* (SPSS). Penganalisisan data SPSS berdasarkan analisis deskriptif, Ujian-t dan ANOVA Satu Hala. Data deskriptif digunakan untuk menentukan nilai min.

Ujian-t pula digunakan untuk menentukan perbezaan min dua kumpulan, manakala ANOVA Satu Hala digunakan untuk menentukan perbezaan varian.

DAPATAN KAJIAN DAN PERBINCANGAN

Jadual 1
Dimensi Kesediaan Pelaksanaan PBD

Kesediaan Pelaksanaan PBD	N	*Minimun*	*Maximum*			Sisihan Piawai
				Min	SE	
Pelaksanaan PBD	50	2.80	5.00	4.06	.091	.646
Bahan/Istrumen PBD	50	3.20	5.00	4.19	.063	.447
Pengredan PBD	50	3.20	5.00	4.14	.063	.446
Bimbingan PBD	50	3.20	5.00	4.27	.072	.510
Pengurusan PBD	50	3.67	5.00	4.31	.059	.419
				Min : 4.19		

Berdasarkan Jadual 1, secara keseluruhannya dimensi kesediaan pelaksanaan PBD menunjukkan tahap yang tinggi dengan skor min 4.19. Nilai min > 3.67 adalah berada pada tahap yang tinggi (Jamil Ahmad, 2002). Bacaan min ini menggambarkan bahawa semua elemen penilaian pelaksanaan PBD di sekolah berada pada tahap yang tinggi. Elemen pelaksanaan PBD dengan skor min 4.06 (s.p 0.646), bahan/instrumen PBD dengan skor min 4.19 (s.p 0.447), pengredan PBD dengan min 4.14 (0.446), bimbingan PBD dengan skor min 4.27 (s.p 0.510) dan pengurusan PBD dengan skor min 4.31 (s.p 0.419). Nilai min yang tinggi menggambarkan bahawa guru-guru di sekolah boleh melaksanakan PBD serta dapat memahami keperluan pelaksanaan PBD di sekolah. Dapatan kajian ini selari dengan dapatan kajian yang yang telah dijalankan oleh Mazarulet al. (2021), Masfarizah dan Yusoff (2020) yang mendapati bahawa tahap pengetahuan guru terhadap pelaksanaan PBD di sekolah adalah tinggi. Dapatan ini juga sangat bertepatan dengan saranan yang menyatakan guru-guru adalah individu yang paling sesuai membuat pentaksiran, memberi skor serta menyatakan laporan pencapaian setiap orang muridnya (Zamri et al., 2010) kerana maklumat daripada pentaksiran akan digunakan oleh guru-guru untuk menyediakan perancangan pengajaran serta melaksanakan proses penambahbaikan dalam aktiviti pengajaran dan pembelajaran agar lebih bermakna (Artika Rasul, 2019).

Walaupun secara keseluruhan semua dimensi yang dinilai berada pada tahap yang tinggi, namun setelah meneliti setiap elemen dalam item instrumen kajian, didapati beberapa orang guru masih berada pada tahap yang rendah. Van Der Kleji et al. (2015) menyatakan bahawa walaupun guru mempunyai kemahiran yang tinggi membuat pantaksiran tetapi sebahagian daripada guru itu menghadapi beberapa cabaran seperti masalah guru itu sendiri, murid, masyarakat setempat serta persekitaran sekolah. Oleh itu, dalam kajian ini didapati beberapa item dalam soal selidik telah menunjukkan skor yang rendah, antara item tersebut ialah guru-guru masih bermasalah dalam melaksanakan PBD dengan tepat. Guru-guru boleh melaksanakan PBD tetapi mereka kurang pasti masa yang tepat membuat pentaksiran PBD. Ramai antara mereka menyatakan PBD dilakukan pada akhir PdP dan juga pada akhir sesuatu topik, sedangkan dalam pentaksiran PBD yang sebenar pentaksiran boleh dilakukan di mana-mana slot dalam proses PdP. PBD boleh dibuat pada set induksi, langkah pengajaran dan pada penutup PdP berdasarkan kemahiran yang hendak dinilai oleh guru. Sh. Siti Huzimah (2019) menyatakan bahawa PBD dilaksanakan sepanjang PdP kerana semua aktiviti yang dijalankan di dalam bilik darjah adalah sebahagian daripada PBD. PBD dibuat secara beterusan dalam PdP untuk mendapatkan maklum balas berkaitan dengan peningkatan, kemajuan, kemahiran dan prestasi murid serta membantu guru menyediakan perancangan penambahbaikan dalam PdP (KPM, 2019). Di samping itu juga, guru-guru masih bermasalah dalam menentukan jenis penilaian yang sesuai digunakan. Guru yang bermasalah dalam menentukan jenis pentaksiran yang digunakan menyebabkan murid tidak dapat meningkatkan prestasi mereka kerana tidak mempunyai persaingan dengan rakan-rakan bagi mencapai prestasi yang lebih baik (Jacob & Parkinson, 2015). Maria Vlachou dan Sammy King (2018) berpendapat pelaksanaan PBD dibuat untuk menentukan tahap prestasi murid, menentukan pengetahuan sedia ada murid, menentukan isi pelajaran yang hendak disampaikan serta membuat perancangan penambahbaikan terhadap aktiviti yang akan dilakukan pada atau selepas pentaksiran dilakukan.

Kurangnya mahir membuat penilaian terhadap sesuatu kemahiran juga antara item yang mendapat skor yang rendah. Ini menggambarkan terdapat guru-guru yang masih bermasalah membuat pentaksiran yang tepat terhadap sesuatu kemahiran. Dapatan ini selari dengan Mohd. Isa (2013) yang menyatakan bahawa walaupun guru-guru sudah mengikuti pelbagai kursus dan didedahkan dengan banyak ceramah tetapi masih ramai antara mereka belum mahir membuat pentaksiran pencapaian murid dengan tepat. Melaksanakan PBD yang berkesan memerlukan seorang guru yang berkemahiran tinggi dalam PBD (Masfarizah & Yusoff, 2020).

Guru-guru juga masih kurang pasti dalam memberi gred pencapaian murid yang tepat. Kesukaran menentukan gred yang sesuai berdasarkan pertimbangan profesional guru boleh menyebabkan pentaksiran tidak dapat menentukan prestasi sebenar individu murid di dalam bilik darjah. PBD dijalankan untuk minilai secara menyeluruh terhadap tahap penguasaan dan prestasi murid (Sihes, 2017). PBD menilai prestasi setiap orang murid melalui aktiviti yang dilaksanakan di sepanjang PdP dijalankan. Maklumat ini juga membantu guru-guru untuk menyediakan aktiviti PdP yang lebih bersistematik berdasarkan tahap keupayaan murid yang sebenar. Creswell dan Clark (2017) juga berpendapat bahawa tingkah laku guru boleh menentukan tahap kepercayaan seseorang individu. Pemberian gred atau tahap pencapaian yang tepat dapat membantu meningkatkan prestasi akademik serta motivasi mereka untuk terus membaiki kelemahan diri. Senin dan Asri (2019) mendapati masih ramai guru memberi komen refleksi yang tidak spesifik dan kurang memberi rangsangan yang positif terhadap usaha murid. Komen guru tidak mengutamakan maklum balas mengenai kekuatan dan kelemahan murid.

Dapatan kajian ini juga menunjukkan guru masih bermasalah dalam menyediakan instrumen pentaksiran yang standard serta mempunyai kesahan dan kebolehpercayaan yang tinggi. Guru-guru masih kurang yakin dengan ketepatan instrumen penilaian yang digunakan untuk menilai tahap sebenar keupayaan muridnya. Abdullan et al. (2020) juga menyatakan bahawa guru kurang berkebolehan menjalankan pentaksiran berdasarkan ketetapan yang dinyatakan dalam DSKP. Guru tidak mampu menetapkan tahap pencapaian dan standard prestasi dalam DSKP boleh menyebabkan penguasaan ditaksir begitu sahaja tanpa memberi makna kepada murid. Dalam merancang PdP guru perlu merungkai DSKP dengan mendalam supaya PBD dapat diaplikasikan dengan berkesan (Arumugham, 2020). Membuat penambahbaikan terhadap strategi pengajaran semasa melaksanakan PdP dapat menentukan tahap penilaian serta mampu membantu murid mengatasi masalah mereka dalam pembelajaran. Kemahiran guru membina instrumen penilaian, menetapkan tahap pencapaian, membuat rumusan yang tepat terhadap keputusan pentaksiran serta berkebolehan menjalankan pelbagai jenis pentaksiran memberi keyakinan terhadap ibu bapa dan membantu mereka untuk meningkatkan pencapaian prestasi murid (Lim et al., 2014).

Walaupun kebanyakan guru memahami konsep PBD dengan jelas tetapi mereka masih memerlukan bimbingan dalam mengaplikasikan PBD secara lebih efisyen di dalam bilik darjah. Guru-guru telah menguasai pengetahuan yang baik terhadap PBD tetapi mereka masih memerlukan banyak sokongan, latihan dan bimbingan yang lebih sesuai supaya pentaksiran yang dilakukan lebih efektif dan bertepatan dengan kehendak sebenar PBD itu dilaksanakan (Goh, 2008; Hui & Ng, 2008). Bagi membina kualiti guru yang sentiasa menepati kehendak cabaran pendidikan semasa, guru perlu sentiasa menyediakan diri dengan pengetahuan terkini dan kemahiran baharu bagi membentuk sikap yang positif, untuk menghadapi perubahan dalam dunia pendidikan (Ramlah et al., 2015).

Jadual 2
Ujian-t Dimensi Kesediaan Pelaksanaan PBD di Sekolah

Ujian-t Kumpulan Bebas *(Independent Samples Test)*						
Kesediaan Perlaksanaan PBD	*Levene's Test for Equality of Variances*		*t-test for Equality of Means*			
	F	Sig.	t	df	*Sig. (2-tailed)*	*Mean Difference*
Pelaksanaan PBD	2.387	.129	.817	48	.418	.15416
Bahan/Instrumen PBD	4.203	.056	-.406	48	.687	-.05331
Pengredan PBD	3.721	.060	.217	48	.829	.02852
Bimbingan PBD	2.928	.093	1.438	48	.157	.21154
Pengurusan PBD	.069	.794	.313	48	.756	.03848

Ujian-t bagi *Independent Sample Test* dua belah atau hujung *(two tails)* bagi menentukan perbezaan min kesediaan pelaksanaan PBD di sekolah bagi guru lelaki dan guru perempuan pada setiap dimensi menunjukkan bacaan ujian Levene $p > 0.05$. Ini menunjukkan bahawa varian untuk dimensi ini adalah homogenous. Maka, bacaan untuk semua dimensi kesediaan pelaksanaan PBD di sekolah dilaporkan berdasarkan pada bacaan *Equal Variances Assumed.* Bacaan bagi pelaksanaan PBD, nilai t (48, $p = 0.412$) = 0.817, bahan/instrumen PBD, nilai t (48, p=0.687) = - 0.406, pengredan PBD, nilai t (48, p=0.829) = 0.217, bimbingan PBD, nilai t (48, p= 0.157) = 1.438, dan pengurusan PBD, nilai t (48, p=0.756) = 0.313. Semua nilai ini menunjukan nilai $p > 0.05$ tidak signifikan. Oleh itu, ujian-t gagal menolak hipotesis nol. Maka, ini menunjukkan bahawa tidak terdapat perbezaan min yang signifikan dalam kesediaan pelaksanaan PBD di sekolah bagi guru lelaki dan guru perempuan.

Jadual 3
Perbezaan Min Berdasarkan Pengalaman Mengajar

Kesediaan Pelaksanaan PBD		**ANOVA** *Sum of Squares*	*df*	*Mean Square*	F	*Sig.*
Pelaksanaan PBD	*Between Groups*	1.498	2	.749	1.859	.167
	Within Groups	18.937	47	.403		
	Total	20.435	49			
Bahan/ Instrumen PBD	*Between Groups*	.661	2	.330	1.701	.194
	Within Groups	9.132	47	.194		
	Total	9.793	49			
Pengredan PBD	*Between Groups*	.238	2	.119	.588	.56
	Within Groups	9.525	47	.203		
	Total	9.763	49			
Bimbingan PBD	*Between Groups*	2.328	2	1.164	5.24	.009
	Within Groups	10.441	47	.222		
	Total	12.769	49			
Pengurusan PBD	*Between Groups*	.451	2	.226	1.302	.282
	Within Groups	8.140	47	.173		
	Total	8.591	49			

Berdasarkan Jadual 3, ujian ANOVA Satu Hala bagi menilai kesediaan pelaksanaan PBD di sekolah oleh guru berdasarkan kategori tempoh pengalaman mengajar menunjukkan bahawa pelaksanaan PBD, nilai F (2, $p = 0.167$) = 1.859, Bahan/ Instrumen PBD, nilai F (2, p=0.194) = 1.701, Pengredan PBD, nilai F (2, p= 0.56) = 0.588, Pengurusan PBD, nilai F (2, p=0.282) = 1.302, maka semua nilai $p > 0.05$ tidak signifikan. Ujian ANOVA gagal menolak hipotesis nol. Ini menunjukkan bahawa tidak terdapat perbezaan min yang signifikan dalam penilaian kesediaan pelaksanaan PBD bagi dimensi pelaksanaan PBD, bahan/instrumen PBD, pengredan PBD dan pengurusan PBD bagi guru berdasarkan tempoh pengalaman mengajar mereka.

Bagi dimensi bimbingan PBD, nilai F (2, p=0.009) = 5.24, p<0.05, signifikan. Dalam Jadual 4, dijelaskan bacaan ANOVA bagi dimensi bimbingan PBD. Bagi dimensi bimbingan PBD, hipotesis nol ditolak, iaitu terdapat perbezaan yang signifikan di antara pengalaman mengajar guru.

Jadual 4
Dimensi Bimbingan PBD

ANOVA Satu Hala					
Bimbingan PBD					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.328	2	1.164	5.24	.009
Within Groups	10.441	47	.222		
Total	12.769	49			

Analisis *Post-hoc* dalam Jadual 5, bagi memperincikan perbandingan antara kumpulan pengalaman mengajar. Dalam Jadual *Multiple Comparisons* yang menggunakan ujian Tukey memaparkan bahawa terdapat perbezaan min yang signifikan bagi kumpulan pengalaman 1-4 tahun dengan kumpulan

pengalaman 9 tahun ke atas. Wajaran kumpulan pengalaman 1-4 tahun lebih besar daripada wajaran kumpulan pengalaman 9 tahun ke atas. Perbezaan min wajaran kumpulan pengalaman 1-4 tahun dengan kumpulan pengalaman 5-8 tahun adalah tidak signifikan walaupun min kumpulan pengalaman 1-4 tahun lebih kecil berbanding min kumpulan pengalaman 5-8 tahun ke atas. Bagi min bimbingan PBD kumpulan pengalaman 5-8 tahun dengan kumpulan pengalaman 9 tahun ke atas, tidak signifikan. Min bimbingan PBD bagi kumpulan pengalaman 5-8 tahun lebih besar daripada min kumpulan pengalaman 9 tahun ke atas.

Jadual 5
Perbandingan Antara Kumpulan Pengalaman Mengajar

Multiple Comparisons

Dependent Variable: Bimbingan PBD
Tukey HSD

(I) pengalaman	(J) pengalaman	*Mean Difference* (I-J)	Std. Error	Sig.	95% *Confidence Interval*	
					Lower Bound	*Upper Bound*
1 - 4 tahun	5 - 8 tahun	.47810	.21574	.079	-.0440	1.0002
	9 tahun ke atas	.64286*	.19917	.006	.1608	1.1249
5 - 8 tahun	1 - 4 tahun	-.47810	.21574	.079	-1.0002	.0440
	9 tahun ke atas	.16476	.15081	.523	-.2002	.5297
9 tahun ke atas	1 - 4 tahun	-.64286*	.19917	.006	-1.1249	-.1608
	5 - 8 tahun	-.16476	.15081	.523	-.5297	.2002

**. The mean difference is significant at the 0.05 level.*

Analisis ini juga menunjukkan min wajaran paling tinggi ialah kumpulan pengalaman 1-4 tahun ke atas, diikuti kumpulan pengalaman 5-8 tahun, dan kumpulan pengalaman 9 tahun ke atas yang mempunyai nilai min yang terkecil bagi elemen bimbingan PBD di sekolah. Data ini mengambarkan bahawa guru-guru baharu lebih memahami dan dapat menerima perubahan lebih mudah berbanding guru-guru yang senior. Oleh itu guru-guru perlu diberi latihan dan kursus yang bersesuian untuk memastikan kompetensi mereka untuk melaksanakan perubahan yang telah diperkenalkan (Kwiek & Szadkowski, 2018). Guru-guru yang mempunyai kompetensi untuk melaksanakan sesuatu program yang baharu diperkenalkan selalunya sudah mempunyai pengalaman dan pengetahuan tentang program yang diperkenalkan (Keddie et al.' 2018). Namum bagi PBD adalah sesuatu yang baharu diperkenalkan kepada guru-guru senior telah memiliki pengalaman dan pengetahuan dalam pentaksiran berasaskan peperiksaan. Keadaan ini menyebabkan mereka sangat perlahan untuk menerima perubahan dalam PBD berbanding guru-guru baharu.

KESIMPULAN

Meskipun secara keseluruhannya tahap pengetahuan guru-guru terhadap PBD ini adalah pada tahap yang tinggi, dan amat memberangsangkan, namun haruslah kita selidiki dan teliti terlebih dahulu setiap butiran kejayaan tersebut. Kejayaan pelaksanaan PBD ini di sekolah-sekolah tidak boleh kita lihat daripada luaran semata-mata. Kejayaan yang sebenar adalah sekiranya setiap elemen tersebut telah berada pada tahap yang tinggi. Perkara ini dapat kita renungkan melalui dapatan kajian ini, misalnya masih terdapat guru-guru yang bermasalah dalam melaksanakan PBD dengan tepat, bermasalah dalam menentukan jenis penilaian yang sesuai, kurang mahir menilai kemahiran, tidak yakin dalam memberi gred, kurang mahir menyediakan instrumen penilaian, dan seumpamanya. Ada dalam kalangan guru yang melaksanakan PBD bermotifkan untuk pembelajaran manakala ada pula yang memberi penekanan terhadap TP. Walaupun kedua-dua aspek ini mempunyai kepentingan dalam pelaksanaan PBD namun tumpuan terhadap TP menyebabkan guru kurang memberi perhatian kepada proses perkembangan pembelajaran murid. Jika keadaan ini berterusan dan tidak diambil tindakan yang sewajarnya, nescaya pentaksiran yang dibuat dalam PBD ini tidak akan memberikan gambaran pencapaian murid-murid yang sebenarnya, dan pentaksiran seumpama ini hanyalah sia-sia sahaja. Sedangkan motif utama PBD yang sebenar adalah mementingkan proses perkembangan

pembelajaran murid berbanding dengan pencapaian. Oleh itu, semua pihak yang terlibat secara langsung mahupun secara tidak langsung dalam pelaksanaan PBD ini haruslah memandang serius perkara ini, bagi memartabatkan mutu pendidikan di negara kita.

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INTEGRATING MINECRAFT WITH THE 5E INSTRUCTIONAL MODEL IN TEACHING FRACTIONS: AN INVESTIGATION OF PUPILS' PROBLEM-SOLVING SKILLS

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ABSTRACT

Problem-solving has been identified as an essential skill in mathematics that learners need to master as it involves the application of logical reasoning and critical thinking to find solutions to complex problems. However, problem-solving is a complex and difficult process for learners to master. Therefore, the aim of this study is to identify the effectiveness of integrating Minecraft and the 5E instructional model in enhancing and retaining pupils' problem-solving skills, especially in solving fractional problems. The study sample consisted of 63 Year 5 pupils in two intact classes which were selected through cluster sampling. The control group consisted of 31 pupils while the treatment group consisted of 32 pupils. Data were obtained through a pretest and posttest which were administered and analyzed to identify pupils' achievement in fractions as well as a delayed posttest to identify the retention of problem-solving skills among pupils in the treatment group. Findings of the study showed that there is a significant difference in the posttest mean achievement score, $t(63) = -3.43$, $p < .05$, with the treatment group obtaining a higher mean achievement score compared to the control group while the result of the one-way repeated measures ANOVA indicated that the integration of Minecraft and the 5E instructional model in the teaching and learning of fractions is effective in retaining pupils' problem-solving skills. It can be concluded that pupils' problem-solving skills in mathematics can be significantly enhanced and retained through the integration of Minecraft and the 5E instructional model.

Keywords : Minecraft, 5E instructional model, problem-solving, fractions, mathematics

ABSTRAK

Penyelesaian masalah telah dikenal pasti sebagai kemahiran penting dalam matematik yang perlu dikuasai oleh pelajar kerana ia melibatkan penggunaan penaakulan logik dan pemikiran kritis untuk mencari penyelesaian bagi masalah yang kompleks. Walau bagaimanapun, penyelesaian masalah adalah proses yang kompleks dan sukar untuk dikuasai oleh murid. Oleh itu, kajian ini bertujuan untuk mengenal pasti keberkesanan penyepaduan Minecraft dan model pengajaran 5E dalam meningkatkan dan mengekalkan kemahiran menyelesaikan masalah murid, terutamanya dalam menyelesaikan masalah pecahan. Sampel kajian terdiri daripada 63 orang murid Tahun 5 dalam dua kelas asal yang dipilih melalui persampelan kluster. Kumpulan kawalan terdiri daripada 31 orang murid manakala kumpulan rawatan terdiri daripada 32 orang murid. Data diperoleh melalui ujian pra dan ujian pasca yang ditadbir dan dianalisis untuk mengenal pasti pencapaian murid dalam pecahan serta ujian pasca lanjutan untuk mengenal pasti pengekalan kemahiran menyelesaikan masalah dalam kalangan murid bagi kumpulan rawatan. Dapatan kajian menunjukkan terdapat perbezaan yang signifikan dalam skor min pencapaian ujian pasca,

t(63) = -3.43, p <.05, dengan kumpulan rawatan memperoleh skor min pencapaian yang lebih tinggi berbanding kumpulan kawalan manakala keputusan ANOVA langkah berulang sehala menunjukkan bahawa penyepaduan Minecraft dan model pengajaran 5E dalam pengajaran dan pembelajaran pecahan adalah berkesan dalam mengekalkan kemahiran menyelesaikan masalah murid. Dengan ini, dapat disimpulkan bahawa kemahiran menyelesaikan masalah murid dalam matematik boleh dipertingkatkan dan dikekalkan dengan ketara melalui penyepaduan Minecraft dan model pengajaran 5E.

Kata kunci: Minecraft, Model Pengajaran 5E, penyelesaian masalah, pecahan, matematik

INTRODUCTION

The teaching and learning of mathematics play a crucial role in education and have far-reaching implications for individuals and society as a whole. Mathematics is not just a subject; it is a discipline that develops critical thinking, problem-solving, logical reasoning skills and analytical skills especially among pupils. The rapid change in industrial and technological activities catalyzed by the Fourth Industrial Revolution (IR 4.0) (Prause & Atari, 2017) as well as the advancement of digital technology has created an uncertain environment for future workforce (Husin et al., 2021; National Skills Commision; 2020). Karagözoğlu (2017) and Van Laar et al. (2017) stated that the rise of sophisticated automation and artifical intelligence has caused repetitive and human-centric tasks to be shifted to a more automated manner and future workers need to be equipped with 21st century skills to enable them to deal with these technological complexities. Individuals who are proficient in 21st century skills such as thinking skills, emotional and social skills as well as attitudinal skills will be able to work in fields that are harder to automate such as working on non-routine tasks and tasks that require the use of cognitive skills (Lamb et al., 2017; Ra et al., 2019).

Therefore, the role and importance of mathematics education has become significant particularly to equip pupils with skills that will enable them not only to have a comprehensive and practical grasp of mathematical concepts (Kado, 2021) but also to effectively solve real-world situations using mathematics (Afni & Hartono, 2020). By realizing that the teaching and learning methods used by teachers affects pupils' performance, achievement and engagement in mathematics, efforts should be made to apply effective and efficient teaching approaches and strategies in the teaching and learning of mathematics to improve pupils learning and achievement (Dulonsky et al., 2013) as well as solve real-world problems (Tezer & Cumhur, 2017).

The integration of Information and Communication Technology (ICT) in teaching and learning has shown to facilitate effective and active learning (Jamieson-Procter et al., 2013) which stimulates and improves pupils' understanding and learning experience of topics (Ghavifekr & Rosdy, 2015) such as fractions. ICT provides access to technology-based equipment and software, which not only supports active learning (Jorge et al., 2003) but also increase pupils' engagement and motivation to perform tasks (Carstens et al., 2021). Moreover, ICT enables pupils to learn at their own pace and in any location (Al-Azawei et al., 2016). Digital games have become a prevalent form of ICT utilized in teaching and learning. The integration of digital games in educational settings has given rise to the implementation of digital game-based learning, which has shown promising outcomes. Tangkui and Keong (2021) highlighted the significance of digital games in mathematics education, as they engage pupils and foster interactive learning experiences. By transforming conventional learning materials into active ones, digital games enable pupils to assume the role of players and active participants in their learning process. At the same time, teachers should also consider the use of the 5E instructional model in the teaching and learning of mathematics as it provides a comprehensive framework that promotes meaningful and

engaging learning experience. Therefore, the use of digital games, particularly Minecraft, and the 5E instructional model in the teaching and learning of mathematics should be considered in an effort to improve pupils' problem-solving skills. At the same time, teachers should also consider the use of the 5E instructional model in the teaching and learning of mathematics as it provides a comprehensive framework that promotes meaningful and engaging learning experiences. The 5E model, consisting of the stages of Engage, Explore, Explain, Elaborate, and Evaluate, encourages pupil-centered and inquiry-based learning. Furthermore, the integration of digital games, particularly Minecraft, with the 5E instructional model can be highly beneficial in enhancing pupils' problem-solving skills in mathematics.

LITERATURE REVIEW

Minecraft

Minecraft is an open world digital game with a *sandbox* concept. In the context of digital games, open worlds are game mechanics that offer a virtual world for players to explore (Sefton, 2008). A digital game with a *sandbox* concept does not set specific objectives to be achieved and gives freedom for players to explore, interact and modify the environment of the virtual world (Kuhn, 2017). Thus, Minecraft is a digital game that allows players to explore without a clear ending or objectives to be achieved (Donellan, 2019). Players will use various materials in Minecraft, especially 3D cubes to build concrete objects according to the player's imagination which is done by collecting, breaking, reconstructing, removing and placing the 3D cubes randomly in Minecraft (Bos et al., 2014; Ekaputra et al., 2013; Kim & Park, 2018; Lane et al., 2017; Mojang, 2015; Nebel et al., 2016). Tangkui and Keong (2021) has highlighted the potential of using Minecraft to teach fractions as shown in Figure 1 and Figure 2. Figure 1 shows how a fraction is represented in Minecraft while Figure 2 shows the constructed concrete objects for fractional problem-solving activities.

Figure 1
Fraction Model

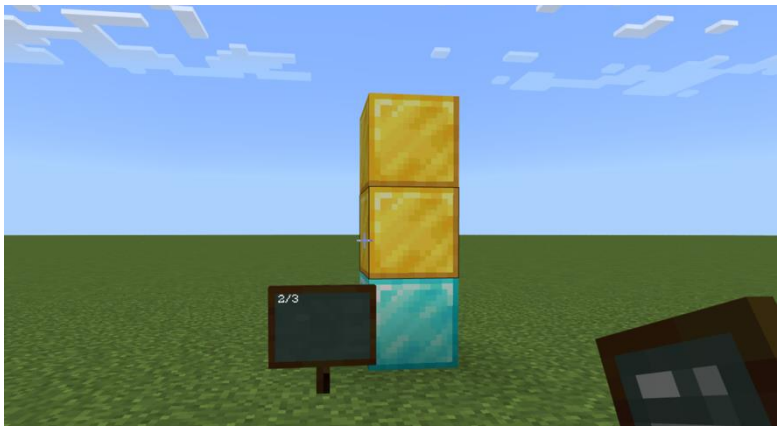
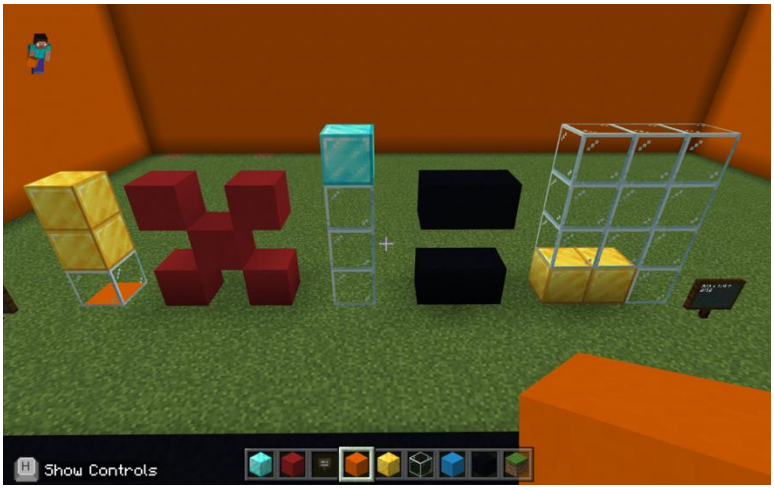


Figure 2
Constructed Concrete Objects for Fractional Problem-solving



The 5E Instructional Model

The 5E instructional model is a framework used in science education to guide the teaching and learning process. It is a pupil-centered approach that encourages active engagement, critical thinking and conceptual understanding, thus providing a structured approach to engage pupils in inquiry-based learning based on the constructivist theory of learning (Bybee et al., 2006; Cakir, 2017). While originally developed for science education, the 5E instructional model's inquiry-based and pupil-centered approach aligns well with the goals of mathematics education which include promoting problem-solving and mathematical reasoning (Bybee, 2009). This instructional model consists of 5 phases designed to foster active participation and exploration among students. The phases include Engage, Explore, Explain, Elaborate and Evaluate.

In the Engage phase, teachers captivate pupils' attention and foster curiosity by presenting real-life problems that are directly relevant to the mathematical concept being taught. This phase stimulates pupils' interest and activates their prior knowledge. In the Explore phase, pupils investigate and explore the mathematical concept through hands-on activities, experiments or problem-solving tasks. This stage encourages active participation, collaboration and critical thinking which enable pupils to construct their understanding of the concept. In the Explain stage, teachers provide explanations, demonstrations as well as conduct discussions to clarify misconceptions and deepen pupils' understanding. This phase aims to provide a solid foundation of knowledge and ensure pupils grasp the key concepts. In the Elaborate phase, pupils are encourage to apply their understanding of the concept to solve problems by transferring their knowledge to different contexts while in the Evaluate phase, teachers assess pupils' learning progress and provide feedback (Bakri & Adnan, 2021; Jerry & Jamaludin, 2021).

Problem-Solving in Mathematics

According to the mathematics curriculum in Malaysia, the primary emphasis of teaching and learning in mathematics is on problem-solving (Kementerian Pendidikan Malaysia, 2018; Maslinah, 2016). This aligns with the objectives outlined in the Malaysian Education Blueprint 2013-2025, which aims to prioritize problem solving within the Malaysian education system (Kementerian Pelajaran Malaysia, 2012). In a broader global context, problem-solving skills are recognized as

essential components of mathematics curricula worldwide (Liljedahl et al., 2016). This is due to the fact that problem-solving abilities are crucial for pupils to effectively address everyday challenges, particularly those involving mathematical concepts and applications (Gurat, 2018).

Past research has consistently highlighted the importance of mastering problem-solving skills in mathematics. According to the National Council of Teachers of Mathematics (NCTM, 2014), problem-solving helps learners build mathematical knoweldge, make connections between mathematical ideas and develop procedural fluency along with conceptual understanding. Polya (1957) stated that problem-solving in mathematics promotes critical thinking skills such as analysis, reasoning, and evaluation. It requires pupils to analyze a problem, develop a plan, execute the plan, and reflect on the solution. This process helps pupils improve their logical reasoning and problem-solving abilities, which in turn provide pupils with opportunities to apply mathematical skills and concepts in real-life situations (Kılıç, 2017). Furthermore, problem-solving in mathematics nurtures pupils' creativity and fosters innovative thinking. It encourages pupils to think outside the box, explore multiple solution and discover alternative approaches which in turn promotes creative thinking and innovation in mathematics (Cho, Caleon & Kapur, 2015).

Enhancing problem-solving skills in mathematics requires the establishment of a supportive learning environment and the utilization of effective instructional strategies. Incorporating technology into the teaching and learning process is a valuable approach to promote and reinforce problem-solving abilities in mathematics. The use of technology, particulary ICT, can provide opportunities for simulations, dynamic visualizations, and interactive problem-solving activities. At the same time, effective instructional strategies should be considered. The use of the 5E instructional model is able to enhance pupils' problem-solving skills in mathematics as this model encourages active pupils participation, critical thinking, and problem-solving. By engaging pupils in meaningful mathematical experiences and providing a structured framework for exploration and explanation, the model promotes the development and enhancement of problem-solving skills in mathematics. Considering the numerous benefits offered by the utilization of technology as well as effective instructional strategies, it is imperative to integrate these approaches into the teaching and learning of mathematics. By combining these elements, educators can create an optimal environment for fostering problem-solving skills and facilitating pupils' mathematical growth.

Moreover, it is equally important to retain problem-solving skills particularly in mathematics. The retention of problem-solving skills in mathematics is crucial as it equips individuals with essential cognitive abilities and prepares them for real-world challenges. Problem-solving fosters critical thinking, logical reasoning, and creativity, enabling individuals to analyze complex situations, devise strategies, and make informed decisions. Proficiency in mathematical problem-solving has been linked to improved academic performance, higher scores on standardized tests, and enhanced problem-solving abilities in other disciplines. Retaining problem-solving skills in mathematics not only supports academic success but also promotes lifelong learning, adaptability, and resilience in an ever-changing world (Valderama & Oligo, 2021).

The Teaching of Fractions using Minecraft and The 5E Instructional Model

Teaching fractions is a critical aspect of mathematics education as it forms the foundation for understanding and working with various mathematical concepts. However, many pupils struggle with fractions due to their abstract nature and the challenges associated with visualizing and manipulating fractional quantities. To address these challenges, educators have explored various instructional approaches to engage pupils and enhance their understanding of fractions. One innovative approach that has gained attention in recent years is the integration of Minecraft, a popular sandbox video game, with the 5E instructional model. The 5E model, consisting of Engage,

Explore, Explain, Elaborate, and Evaluate phases, provides a structured framework for inquiry-based learning. When combined with the interactive and immersive nature of Minecraft, this integration offers a unique opportunity to actively engage pupils in exploring and solving fraction-related problems within a virtual environment.

The use of Minecraft in education has shown promising results in various subject areas (Bos et al., Ekaputra et al., 2013; Tangkui & Keong, 2021) including mathematics. Its cube-based construction and exploration mechanics provide a platform for pupils to manipulate and interact with virtual objects and environments, fostering spatial reasoning and problem-solving skills. By integrating Minecraft with the 5E instructional model, educators can capitalize on the game's engaging and interactive nature to create meaningful learning experiences for pupils while teaching fractions.

By integrating Minecraft with the 5E instructional model, teachers can enhance pupils' problem-solving skills in the teaching and learning of fractions. The 5E model provides a structured framework for inquiry-based learning, while Minecraft offers an immersive and interactive platform that engages pupils in hands-on exploration. This integration enables pupils to apply their understanding of fractions in real-world contexts within the Minecraft environment, fostering critical thinking, problem-solving, and mathematical reasoning abilities

Table 1
The Integration of the 5E Instructional Model and Minecraft in the Teaching and Learning of Fractions

5E Instructional Model Phases	Description
Engage	● Teacher introduces the concept of fractions using fraction models in Minecraft.
Explore	● Pupils investigate and explore fractions in Minecraft by manipulating cubes, creating fraction-based designs or solving fraction-related challenges and activities within the game environment.
Explain	● Teacher provides explanation, conducts discussion and demonstration to help pupils understand the concepts of fractions ● Teacher uses fraction models to explain and clarify concepts such as numerator, denominator, equivalent fractions and operations with fractions.
Elaborate	● Teacher extends pupils' understanding of fractions by engaging them in problem-solving tasks or activities in Minecraft ● Pupils design and build structures with specific fractional dimensions or solve fraction-based activities within the game.
Evaluate	● Teacher assesses pupils' understanding of fractions using Minecraft-related assessments

PROBLEM STATEMENT

Fractions are a fundamental concept in mathematics used in a wide range of mathematical operations and real-world applications. Having a solid conceptual understanding of fractions is important for many areas of mathematics, including arithmetic, algebra (Booth et al., 2014) and geometry. Fractions allow learners to represent and compare quantities that are not whole numbers, and are a key tool for understanding and solving problems involving fractions in real life

such as ratios, rates and decimals (Abdullah et al., 2015; Booth et al., 2014; Ndalichako, 2013; Wijaya, 2017).

However, most learners in Malaysia still struggles to understand and master the concepts of fractions despite having been exposed to the topic since early primary years, thus impacting learners' achievement in mathematics based on Malaysia's unsatisfactory results in the Trends in Mathematics and Science Studies (TIMSS) assessment that involves fractions (Abdullah et al., 2015; Mullis et al., 2020). Table 2 shows Malaysia's average score in mathematics in TIMSS 2019 and based on the table, the average score obtained by Malaysia is below the international average score of 500. With reference to Table 3, the average score obtained by Malaysia shows that the achievement of Malaysian learners is clearly at an unsatisfactory level.

Table 2
Malaysia's Position based on Mathematics Achievement in TIMSS 2019

Year	Average score	Position
2019	461	26 out of 36 countries

Source: Mullis et al. (2020)

Table 3
Level of International Benchmark and Average Score

Benchmark	Average score
Advanced	625
High	550
Intermediate	475
Low	400

Source: Mullis et al. (2020)

The TIMSS mathematics assessment framework for 4th grade, which are Year 5 pupils in Malaysia, consists of two dimensions; the content domain and the cognitive domain. The content domain is a body of knowledge, skills or abilities being measured in a study, experiment or test while the cognitive domain refers to the domain that is focused on intellectual skills such as critical thinking, problem-solving and creating knowledge base. As shown in Table 4, fractions are among the topic tested in the assessment, which indicates the importance of fractions in the assessment.

Table 4
Percentage of Questions Allocated for Each Topic at 4th Grade in TIMSS 2019

Content Domain	Topic	Percentage	Total Percentage
Number	Integer	10%	30%
	Fractions and decimals	10%	
	Ratio, percentage and proportion	10%	
Algebra	Expressions, operations equations	20%	30%
	Relation and function	10%	
Geometry	Geometric shapes and measurements	20%	20%
Data and probability	Data	15%	20%
	Probability	5%	

Source: Mullis et al. (2020)

One of the major obstacles which contributed to Malaysia's unsatisfactory level of achievement in fractions is misconception in fractions, which is also known as *whole number bias*. *Whole number bias* is defined as the tendency to focus on the whole number components of fractions (numerators and denominators) rather than fraction as a single number (Lamon, 2008;, Ni & Zhou, 2005; Van de Walle et al., 2019). This has led pupils to generalize the concepts of whole numbers to that of fractions, thus resulting in learners to solve the addition and subtraction of fractions by directly adding or subtracting the numerator with the numerator and the denominator with the denominator (Dhlamini & Kibiige, 2014; Li, 2014; Loong, 2014; Ndalichako, 2013) as they assumed that the numerator and denominator are two separate whole numbers instead of two numbers that are related to each other (DeWolf & Vosniadou, 2015). This clearly indicates that pupils had difficulties in the conceptual understanding of fractions.

To overcome this obstacle, proper methods and approaches should be emphasized and applied in the teaching and learning process since learners' academic achievement is often linked to the effectiveness of the methods and approaches practiced by teachers (Zakaria & Addenan, 2015).

RESEARCH OBJECTIVES

The research objectives are as follows:

a. To identify whether there is a significant difference in the posttest mean achievement score between pupils who were exposed to the teaching and learning of fractions using Minecraft integrated with the 5E instructional model and pupils who were exposed to the teaching and learning of fractions using conventional methods
b. To identify whether the teaching and learning of fractions using Minecraft integrated with the 5E instructional model is effective in the retention of problem-solving skills

RESEARCH QUESTIONS

Based on the research objectives, the research questions are as follows:

a. Is there any significant difference in the posttest mean achievement score between pupils who were exposed to the teaching and learning of fractions using Minecraft integrated with the 5E instructional model and pupils who were exposed to the teaching and learning of fractions using conventional methods?
b. Is there any significant difference between the pretest, posttest and delayed posttest mean achievement scores involving the retention of problem-solving skills among pupils who were exposed to the teaching and learning of fractions using Minecraft integrated with the 5E instructional model?

HYPOTHESIS

$H_0$1: There is no significant difference in the posttest mean achievement score between the control group and treatment group

$H_0$2: There is no significant difference between the pretest, posttest and delayed posttest mean achievement score involving the retention of problem-solving skills in the treatment group

METHODOLOGY

Research Design

This research uses a quasi-experimental pretest and posttest non-equivalent control groups design.

Sampling

The study was conducted at a primary school in the district of Keningau which is one of the districts in Sabah. The population consisted of 63 Year 5 pupils in two intact classes. Through cluster sampling, the class which contains 31 pupils were selected as the control group while the class which contains 32 pupils were selected as the treatment group. The control group was exposed to the teaching and learning of fractions using conventional methods while the treatment group was exposed to the teaching and learning of fractions using Minecraft integrated with the 5E instructional model. The selection of Year 5 pupils as sample for this study is to meet the criteria commonly used in the TIMSS assessment, which involves study samples around the age of 11.

Research Instruments

A pretest, posttest and delayed posttest were used as research instruments. Each instrument contains 15 restricted-response questions that specifically addressed the topic of fractions in the Year 5 syllabus. These questions were developed based on a Test Specification Table, ensuring alignment with the intended learning outcomes and content coverage. The items used in the pretest, posttest and delayed posttest were identical to ensure equal comparison; however, the arrangement of the items in the posttest and delayed posttest was altered. The reliability of the pretest was determined by conducting a Cohen's Kappa analysis to evaluate the level of agreement among raters (inter-rater agreement). Cohen's Kappa analysis was conducted to determine the degree of agreement between raters (Landis & Koch, 1977) in scoring each item in the pretest. The analysis yielded a value that shows the degree of agreement. Table 5 shows the interpretation of the degree of agreement between raters, while Table 6 shows the realibility of each item in the pretest based on the Cohen Kappa’s values obtained. Based on Table 6, the reliability of the items in the pretest is high.

Table 5
Interpretation of the Degree of Agreement based on the Cohen Kappa's Value

Cohen Kappa Value	Degree of agreement
0 - .20	None
.21 - .39	Minimum
.40 - .59	Weak
.60 - .79	Intermediate
.80 - .90	Strong
.90 – 1.00	Almost perfect

Source : McHugh (2012)

Table 6
Reliability of Items in the Pretest based on the Cohen Kappa's Value

Item	Cohen Kappa Value	Degree of agreement
1	0.932	Almost perfect
2	0.948	Almost perfect
3	0.950	Almost perfect
4	0.895	Strong
5	0.895	Strong
6	0.944	Almost perfect
7	0.862	Strong
8	0.927	Almost perfect
9	0.938	Almost perfect
10	1.000	Almost perfect
11	0.925	Almost perfect
12	0.918	Almost perfect
13	1.000	Almost perfect
14	0.907	Almost perfect
15	0.912	Almost perfect

Data Analysis

Data were analyzed using inferential statistics, namely *t*-test and one-way repeated measures ANOVA. A *t*-test was used to identify if there is a significant difference in the posttest mean achievement scores between pupils in the control group and pupils in the treatment group while a one-way repeated measures ANOVA was used to identify the retention of problem-solving skills among pupils in the treatment group. A one-way repeated measures ANOVA was used to determine the retention of problem-solving skills instead of a *t*-test so as to minimize the likelihood of committing Type 1 Error (Bakdash & Marusich, 2019).

RESEARCH FINDINGS AND DISCUSSION

Normality Test

In this study, a normality test was carried out to determine if parametric tests are suitable for statistical analysis. The Shapiro-Wilk statistical test was used to test the normality of the pretest

and posttest data of the control group as well as the pretest, posttest and delayed posttest data of the treatment group.

Based on the analysis of normality of the control group, the value of normality of the pretest is .08 while the value of normality of the posttest is .07. Since both values are greater than the significance value of .05, the pretest and posttest data of the control group are normally distributed and thus parametric statistics are used to analyze the data.

Based on the analysis of normality of the treatment group, the value of normality of the pretest is .08, the value of normality of the posttest is .06 and the value of normality of the delayed posttest is .59. Since the three values are greater than the significance value of .05, the pretest, posttest and delayed posttest data of the treatment group are normally distributed. Therefore, parametric statistics are used to analyze the data.

$H_0$1: There is no significant difference in the posttest mean achievement score between the control group and treatment group

Table 7 shows the posttest mean achievement scorea for the control group and treatment group while Table 8 shows the Levene's test for equality of variances. By referring to Table 8, Levene's test for equality of variances which is not significant (p = .78) shows that both the control group and the treatment group have equal variances. The null hypothesis fails to be rejected, so the two independent samples are assumed to have equal variances. Based on the tables, there is a significant difference between the posttest mean achievement score of the control group and the posttest mean achievement score of the treatment group, $t(61) = -3.63$, $p<.05$). Therefore, the null hypothesis is rejected. The treatment group obtained a higher posttest mean achievement score than the control group. This indicated that pupils experienced a higher mean achievement score when exposed to the teaching and learning of fractions using Minecraft integrated with the 5E instructional model as compared to those being taught using the conventional method.

Table 7
Posttest Mean Achievement Score for the Control Group and Treatment Group

	Group	N	Mean	Standard Deviation	Standard error of mean
Posttest score	Control	31	15.21	2.75	3.10
	Treatment	32	19.72	2.73	3.07

Table 8
Independent Samples T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Posttest score	Equal variances assumed	.07	.78	-3.63	63	.00	-15.86	4.40	-24.66	-7.06
	Equal variances not assumed			-3.61	62.89	.00	-15.82	4.39	-24.64	-7.08

Significant at p < .05

$H_0$2: There is no significant difference between the pretest, posttest and delayed posttest mean achievement score involving the retention of problem-solving skills in the treatment group

A one-way repeated measures ANOVA can be used to analyze the retention of problem-solving skills in the treatment group since the delayed posttest data is normally distributed. Table 9 shows the pretest mean achievement score (*M*=2.93, *SD*=0.45), the posttest mean achievement score (*M*=3.27, *SD*=0.45) and the delayed posttest mean achievement score (*M*=3.22, *SD*=0.37) for the treatment group. Based on the table, the posttest mean achievement score is higher than the pretest mean achievement score and the delayed posttest mean achievement score.

Table 9
Pretest, Posttest and Delayed Posttest Mean Achievement Score for the Treatment Group

	Pretest	Posttest	Delayed posttest
N	32	32	32
Mean	2.93	3.27	3.22
Standard deviation	0.45	0.45	0.37

To identify the homogeneity of data variance, the tests of homogeneity of variance was carried out with Table 10 showing the result of the analysis. The *p*-value is .73, which is higher than the significance level of .05. This result suggests that the data variance is homogeneous. Therefore, one-way ANOVA can be used to analyze the data.

Table 10
Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Test series	Based on mean	.30	2	42	.73

Based on Table 11, the significance value is lower than .05. Therefore, the null hypothesis is rejected. There is a significant difference in the pretest, posttest and delayed posttest mean achievement scores. Since the ANOVA analysis showed that there is a significant difference between the three test series, further tests were carried out to identify the difference, which involved comparing the combination of the test series. Since the variance of the data is homogenous, the analysis was carried out using Bonferroni's Post Hoc analysis, with the result shown in Table 12. By referring to the *p*-value, which are less than the significance level of .05, the result of the Bonferroni's Post Hoc analysis showed that there is a significant difference in the mean achievement scores between the pretest, posttest and delayed posttest. The null hypothesis is rejected, indicating that there is a lasting effect of problem-solving skills among pupils who were exposed to the teaching and learning of fractions using Minecraft integrated with the 5E instructional model.

Table 11
ANOVA Analysis

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	508.11	2	254.05	343.99	.00
Within Groups	31.018	42	.74		
Total	53.913	44			

Table 12
Bonferroni's Post Hoc Analysis

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pretest	Posttest	-10.4	.31	.00	-8.18	-6.62
	Delayed posttest	-23.58	.31	.02	-1.36	.20
Posttest	Pretest	7.40	.31	.00	6.61	8.18
	Delayed posttest	6.82	.31	.00	6.03	7.60
Delayed posttest	Pretest	3.58	.31	.02	-.20	1.36
	Posttest	-6.82	.31	.00	-7.60	-6.03

Findings of the study provide evidence that integrating Minecraft and the 5E instructional model in fractional problem-solving activities effectively enhances pupils' problem-solving skills. This is supported by the increase in achievement scores among pupils in the treatment group, compared to those using conventional methods. Hands-on activities involving the manipulation of virtual cubes in Minecraft offers an interactive approach to the teaching and learning of fractions. This approach facilitates a tangible connection between the hands-on activities and the abstract concept of fractions. Consequently, pupils' problem-solving skills are strengthened through these activities. As a result, pupils are better equipped to understand mathematical concepts as they can better visualize the concepts in their minds (Holmes, 2013; Kontaş, 2016). In learning fractions, the ability to visualize abstract fraction concepts would aid in the development of a more robust conceptual understanding of fractions as suggested by Abdullah et al. (2015) and Özkan et al. (2018). Through Minecraft, pupils can easily visualize fraction concepts by engaging in manipulation activities such as arranging, moving, destroying and modifying 3D cubes. By actively participating in hands-on activities, pupils can forge connections between new knowledge and relate it to existing knowledge, fostering a more comprehensive grasp of mathematical concepts (Boggan et al., 2010; Kelly, 2006). As a result, the improvement of fractional problem-solving skills and conceptual understanding has significantly contributed to the pupils' ability to effectively solve fraction-related problems, thereby elevating their overall achievement.

Findings of the study also showed that the use of Minecraft integrated with the 5E instructional model in the teaching and learning of fractions has a significant impact on the retention of the pupils' problem-solving skills. Compared to conventional methods, the use of Minecraft has given pupils the opportunity to be actively involved in the teaching and learning of mathematics by carrying out activities that involve solving fractional problems. Minecraft offers pupils an engaging platform to actively participate in the teaching and learning of mathematics through interactive fractional problem-solving activities. This active participation facilitates better and more effective guidance from teachers in solving mathematical problems (Tangkui, 2021). By utilizing Minecraft as a platform for hands-on problem-solving activities, pupils can engage in repetitive practice without constraints, exploring various solutions within a virtual environment. The absence of real-world consequences for mistakes reduces anxiety, fostering a growth mindset and encouraging pupils to take risks in their learning. As pupils develop proficiency and efficiency in solving mathematical problems through these experiences, they are more likely to retain their knowledge over a longer period, particularly when provided with appropriate references and resources to reinforce their learning. Minecraft's interactive nature, combined with scaffolding materials, supports pupils' retention of mathematical concepts and skills.

The 5E instructional model enhances and retains pupils' problem-solving skills by providing a comprehensive and engaging approach to learning. The model begins by engaging pupils

interest and curiosity in the topic, motivating them to explore and understand the relevance of problem-solving in real-life situations. Through exploration, pupils actively investigate mathematical concepts and develop critical thinking skills by analyzing patterns and formulating effective problem-solving strategies. In the explanation phase, pupils deepen their understanding of the concepts through conceptual explanations and discussions. The model then moves to the elaboration stage, where pupils apply their knowledge to solve more complex problems and further develop their problem-solving skills. Finally, the evaluation phase assesses pupils' understanding and abilities, enabling them to reflect on their progress and identify areas for improvement. By encompassing the phases of engagement, exploration, explanation, elaboration, and evaluation, the 5E instructional model fosters a holistic learning experience that enhances pupils' problem-solving skills in mathematics, in line with the research by Adu and Folson (2023), Bybee (2014) and Runisah et al, (2017).

CONCLUSION

In conclusion, the integration of Minecraft and the 5E instructional model in teaching fractions has shown promising results in enhancing and retaining pupils' problem-solving skills. The immersive and interactive nature of Minecraft engages pupils in meaningful experiences, allowing them to explore and manipulate fractions in a virtual environment. By following the 5E instructional model, pupils are guided through a structured learning process that encourages critical thinking and problem-solving. The investigation indicates that this integration promotes a deeper understanding of fractions, fosters creativity, and cultivates collaborative skills. This approach has the potential to revolutionize mathematics education by providing an engaging and effective tool for teaching fractions.

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GOOGLE CLASSROOM: LEARNING TOOLS FOR PDPP INTERIM TEACHERS

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ABSTRACT

Google Classroom (GC) is the main online platform used for Batu Lintang Teacher Education Institute (BLTEI) virtual learning during Pandemic Covid-19. GC has facilitated ubiquitous learning as long as there is internet connection. One of the aims of this study is to find out PDPP Interim Teachers' perceptions on the use of GC as the virtual learning environment. Besides, this study also aims to find out whether there are significant differences exist between gender and also whether geographical location make any differences to the teachers in using GC as their learning platform. A total of 205 teachers were involved in this research and a survey questionnaire was used for data collection. Data analysis has shown that the teachers have positive perception towards the use of GC as their learning platform. Besides, GC also helped the teachers to interact online during the learning process. The data also shows that there is insignificant difference in both gender and geographical location in using GC as the learning platform.

Keywords: Google Classroom, gender, geographical location, virtual learning environment, ubiquitous learning

ABSTRAK

Google Classroom (GC) adalah platform dalam talian utama yang digunakan untuk pembelajaran maya Institut Pendidikan Guru Kampus Batu Lintang (IPGKBL) semasa Pandemik Covid-19. GC telah memudahkan pembelajaran ubiquitous selagi terdapat perkhidmatan internet. Salah satu tujuan kajian ini adalah untuk mengetahui persepsi Guru Interim PDPP terhadap penggunaan GC sebagai persekitaran pembelajaran maya. Selain itu, kajian ini juga bertujuan untuk mengetahui sama ada terdapat perbezaan yang signifikan antara jantina dan juga antara lokasi geografi kepada guru dalam menggunakan GC sebagai platform pembelajaran mereka. Sejumlah 205 guru terlibat dalam penyelidikan ini dan soal selidik tinjauan digunakan untuk pengumpulan data. Analisis data menunjukkan bahawa guru-guru mempunyai persepsi positif terhadap penggunaan GC sebagai platform pembelajaran mereka. Selain itu, GC juga membantu guru-guru untuk berinteraksi secara dalam talian semasa proses pembelajaran. Data juga menunjukkan bahawa tiada perbezaan yang signifikan mengikut jantina dan lokasi geografi dalam menggunakan GC sebagai platform pembelajaran.

***Kata kunci**: Google Classroom, jantina, lokasi geografi, persekitaran pembelajaran maya, pembelajaran ubiquitous*

INTRODUCTION

Pandemic COVID-19 had impacted Batu Lintang Teacher Education Institute (BLTEI). All teaching and learning activities were conducted online. The widespread of COVID-19 in March 2020 has awoken lecturers and students to be prepared to teach through online platform like Google Classroom (GC). In reality, many constraints have yet to be found and need to be taken into consideration.

Due to this situation, the Ministry of Education (MOE) has decided to change all academic face-to-face teaching and learning activities to synchronous or asynchronous mode. All face-to-face learning and teaching activities will be suspended (Muhd Asyraf Sawal, 2020). Therefore, Teaching Training Centre need to identify the best methods and strategies to continue teaching and learning (T&L) in ensuring that the students' learning process are not disrupted.

PROBLEM STATEMENT

In ensuring that the students' learning process is not disrupted, BLTEI had used GC as a tool in conducting the online T&L activities. It will be conducted in a virtual environment where students can access the GC learning platform at anytime and anywhere they preferred as long the environments has Internet connection. GC is used for T&L at BLTEI starting January 2020, which bring benefits particularly in improving T&L.

Research by Nur Alim et al. (2019) described that the use of GC was effective if limitation due to the lack of devices like smartphone, Wi-Fi or mobile data availability to access the platform were overcome. Problems faced by students in using virtual learning environment was also mentioned in research carried out by Salam (2020) that many students have to upload their assignments until midnight.

Therefore, one of the aims of this study is to find out PDPP Interim teachers' perceptions in using GC as the virtual learning environments during Pandemic COVID-19. This study also aims at investigating whether significant differences exist based on gender and geographical location of the teachers.

RESEARCH OBJECTIVES

This research aims at finding out:

a. PDPP interim teachers' perceptions in using GC as the virtual learning platform.
b. gender differences among PDPP interm teachers in learning through the GC.
c. geographical location differences among PDPP interm teachers in learning through the GC.

LIMITATIONS OF THE STUDY

The scope and limitations of this study are as follows:

a. This study focuses on PDPP interim teachers who take the subject EDUP2112 Teaching Technology and Media Semester II 2020 / 2021 and EDUP2093 Pedagogy Semester I 2020 / 2021.
b. This study is based on PDPP interim teachers' perceptions on the use of GC as their learning platform.

LITERATURE REVIEW

Google Classroom (GC)

GC is a new tool in Google Apps for Education that was launched in 2014 (Sukamawati & Nensia, 2019). They admitted that GC allows teachers to build and arrange assignments easily, provide input quickly and interact with their students with ease. Therefore, online or e-learning provides many benefits over conventional classroom teaching. According to Wang et al. (2012) GC is a popular Web 2.0 tools that provides lot of interesting features and functions. It allows students to submit their assignments and tasks to be marked by their teachers within the defined deadlines. At the same time, lecturers can check each students' progress and return their tasks with comments. Hence, students can review and revise their assignments. Abazi-Bexheti et al. (2018) agreed and said that GC helps to track the activity of the instructors in the system as well as the system usage. Based on Abazi-Bexheti et al. (2018) and Iliyasu Hussaini et al. (2020), benefits of GC are summarised as such:

a. Allows teachers to post lecture notes, create assignments, make announcements, set due dates for assignments. Teachers can create quizzes, add videos and links of variety of resources.
b. Teachers can create different groups in one classroom, then give each group a different assignment, thus making the class to be active and interesting.
c. Teachers can easily identify students that miss class assignments and students that submit their assignments late.
d. It is flexible, enabling teachers to extend due dates so that all students can submit their assignments and it allows teachers to update or review students' grades.
e. Previous posts made by teachers can be reused and then posted to the same group or to a different group
f. More than one teachers can be added in the classroom and each teachers can grade students' assignments

Based on the previous studies, GC is an effective learning and teaching tool for both lecturers and students. Numerous features provided by GC will make it easier for lecturers to conduct learning activities. The learning process takes place not only in the classroom, but also outside of it, as students can access GC anywhere and any time.

Research by Sukmawati and Nensia (2019) said that GC has an important role in English learning teaching. They found that students can focus on their discipline. Students can easily submit assignment anywhere through handphone and interact with lecturers and other students in a private comment. In other words, learning and teaching activities can be carried out in a virtual and networked environment.

A study by Iliyasu Hussaini et al. (2020) indicated that GC is effective digital tool in improving students' access and attentiveness towards learning knowledge and skills. They found that GC makes students become active learners, it also provides meaningful feedback to both students and parents. Kamberi (2020) agreed that students have a more positive attitude towards GC and they view it as a modern technique and strategy for learning. However, research by Nur Alim et al. (2019) showed that the use of GC was effective with various limitations such as not all students got an account what was provided by the lecturers because they did not have a smartphone. They found out that Wi-Fi availability in the campus was limited and students did not have enough mobile data plan during the time of online discussion and even some students submitted their assignments using their friends' account. Poor network has hindered students from effective utilization of GC. This may be the reason that certain teachers are preferring to more traditional teaching and learning rather than GC (Kamberi, 2020). To smoothen learning process, teachers should integrate the traditional teaching with GC to improve students' performance (Iliyasu Hussaini et al., 2020).

Virtual Learning Environment

Virtual learning environment (VLE), is a cloud-based platform that provides tools to manage any classroom or blended learning environment. It supports T&L methods which allows T&L to be carried out without restriction of time and place, as long as the environment has a network connectivity (Francis, 2018). Demian and Morrice (2012) agreed and said a well-maintained VLE should enable

students of all learning styles to receive the best possible education. They admit that the resources on a VLE such as text files, audio files, videos and their content should be able to cater the needs of the students or as it would be useless as it does not add to the students' learning experience.

In a study of 157 students at Loughborough University, it was found that the VLE has very little effect on students' academic performance within the Geotechnics 3 module, but a moderate effect on their performance in the Design Project. This implies that students tend to visit VLE for resources view and forums simply as a tool in answering lecturers' queries rather than as a tool in achieving intended learning outcomes (Demian & Morrice, 2012). Therefore, the success of a VLE depends on the students' acceptance and use of such an e-learning system. Research by Van Raaij and Schepers (2008) found that perceived usefulness has a direct effect on VLE use. However, perceived ease of use and subjective norm have only indirect effects through perceived usefulness. This implies that program managers in education should not only concern themselves with basic system design but should also address individual differences between VLE users.

Nevertheless, the impacts may vary according to the course and the perceived utility of the VLE. Research by Barker and Gossman (2013) found that 53% of respondents either agree or strongly agree that the use of SFC Moodle has a positive impact on learning, 55% of respondents either agree or strongly agree that the use of SFC Moodle helps to develop independent learning. And 43% of respondents either agree or strongly agree that the use of SFC Moodle increases motivation to learn. This shows that the use of a VLE has a positive impact on student learning and encourages independent learning with the opportunity to learn informally at a time, place and pace. Therefore, students will feel enthusiastic and motivated towards the use of VLEs, although they realized it is sometimes challenging for them to deal with some types of educational technology (Mosquera, 2017).

In a study by Cassidy (2016) with 128 undergraduate students in higher education also found that VLE had improved communication, increased student satisfaction and have greater variety of teaching methods in VLE. This was supported by Anekwe (2017) and said virtual classrooms have positive impacts on the university's students, they positively give continued support and preparedness for virtual classrooms. Therefore, students should be made to be more aware of the impacts of the virtual classrooms. They should also be motivated to be participating more in virtual classrooms.

Students' Perception In Using Google Classroom

Technology Acceptance Model (TAM) describe two beliefs that determine behavioral intention to use technology: perceived usefulness and perceived ease of use (Davis, 1989). Perceived usefulness is defined as the level of personal belief generated from personal improvement after using the technology. Perceived ease of use is the explanation of personal belief about the easiness to use the technology. The intention to use the technology is mediated by perceived usefulness and perceived ease of use. Perception on the benefits to use technology also affect the ease of use. User will use the technology due to its benefits more compare to the ease of use (Hidayat et al., 2019).

There are research which have been carried out using TAM to study factors that affect the use of GC which include user satisfaction. Usefulness and ease of use were among the factors that would influence user satisfaction (Hemrungrote et al., 2017). These factors also influence the behavioural intention to use GC (Al-Maroof & Al-Emran, 2018; Wijaya, 2016). Ansong-Gyimah (2020) extended TAM model to study attitude towards GC use. Data analysis showed that perceived usefulness and perceived ease of use were significant in predicting users' attitude towards using GC. Hidayat et al. (2019) combined TAM and self-efficacy scale to study five predictors: ease of access, ease of usefulness, communication and interaction, perceived instruction delivery and student satisfactory to study student teachers' perceptions in using GC (Kuo et al., 2014) for blended learning. Data analysis showed that ease of use was average indicating that GC was easy to log in and easy to access through GC apps installed in the handphone. The data showed that GC was useful in helping students to do tasks on time. The research also found that GC could develop students' motivation, spirit and self-study ability. However, students preferred real face-to-face class rather than through GC. The chat feature in GC was also not as complete and useful as the social media. Research by Al-Maroof and Al-Emran (2018) also used TAM model to study students' acceptance of GC. The results showed that perceived ease of use and perceived usefulness positively influence the behavioral intention, which in turn influence the actual usage of GC.

User satisfaction is also affected by online interaction (Shaharanee et al., 2016). There are four types of online learning interaction: content interaction, conversation and collaboration, intrapersonal/metacognitive strategies, and need for support (Northrup et al., 2002). Learning Interaction Theory described that there are different forms of student interaction. Therefore, teachers need to facilitate online learning through appropriate techniques and activities (Anderson & Dron, 2011). Research carried out by Alqurashi (2017) showed that learner-content interaction was the strongest and most significant predictor of student satisfaction in online learning environment. Similar finding was also reported in research carried out by Kuo et al. (2014). Students think about ideas, knowledge and information received during their interaction with online content. Two elements of Moore's Theory of Transactional Distance: (a) learner autonomy and (b) dialogue between the instructor and student showed significant relationship with student satisfaction for online courses (Burgess, 2006). Research carried out by Shaharanee et al. (2016) on the use of GC as a tool for T&L indicated that making GC into an interactive online learning platform was what the students need. Zulkafa and Ali (2020) carried out a research to study the ease of access, perceived usefulness, communication and interaction and students' satisfaction in using GC. Data collected showed that it was easy for students to submit assignment in GC. Dateline indicator in GC was useful in helping students to submit assignment on time. Furthermore, students were comfortable with the communication and interaction features provided through GC. In addition to that, students were satisfied with learning provided through GC platform. Research by Rajabalee and Santally (2020) on learner satisfaction, engagement and performances in an online module showed that students' satisfaction and their engagement were essential elements for students' online learning experiences. Data analysis also showed that technical difficulties and lack of tutor support created a sense of frustration for the students.

METHODOLOGY

This study is a quantitative study in the form of a survey that involves PDPP interim students who use GC as their VLE learning platform. A set of questionnaire was used for data collection through Google Form. The questionnaire was adopted from research by Adit Gupta and Pooja Pathania (2020) and Kok (2020). The questionnaire was divided into Section A and B. Section A contains the respondents' demographic information while section B contains 20 questions to collect data related to students' perceptions on the use of GC as a learning platform in aiding the learning process on the virtual and networked environment. Section A uses a nominal scale and Section B uses an ordinal scale in the form of a 5-point likert scale (Cohen et al., 2007).

Purposive sampling technique was used in selecting the students. The sample size determinant table of Krejcie and Morgan (1970) was used as a reference in determining the sample size. The data collected will be recorded and analyzed using Statistical Package for Social Sciences (SPSS) version 21. The data will be descriptively analysed using frequency, percentage and mean scores.

DATA ANALYSIS AND RESEARCH FINDINGS

This section reports on the reliability of the questionnaire used and the quantitative data analysis to achieve all the research objectives. A 5-point likert scale type questions on "Learning Tools for Interim Teachers" were asked in the questionnaire in order to find out students' perceptions, whether gender and geographical location differences exist while learning using the GC as a learning tool. The alphacronbach coefficient for the instrument is 0.936, suggesting that it has relatively high internal consistency.

Description of Demographic Profiles

The respondents consist of 205 PDPP interim teachers who are taking the Diploma Education programmes in Teachers Training Institute where GC platform has been implemented to carry out the T&L activities for students. The demographic information of the respondents was analysed for the aspect on gender, groups according to their major and intake, experience in using GC and location of

the school they teach. Table 1 shows the distribution of the respondents according to their gender. The total number of respondents in this study consists of 59% (121) female teachers and 41% (84) of male teachers. This shows that majority of the respondents are female.

Table 1
Demographic of Respondents

Items	Frequency	Percent (%)
Gender		
Male	84	41.0
Female	121	59.0
Group		
Bahasa Melayu (Sekolah Menengah) Oktober 2020	13	6.3
PAKK (Sekolah Rendah) Oktober 2020	22	10.7
Pendidikan Islam (Sekolah Menengah) Jun 2020	17	8.3
Pendidikan Islam 1 (Sekolah Rendah) Oktober 2020	32	15.6
Pendidikan Islam 2 (Sekolah Rendah) Jun 2020	72	35.1
Sejarah (Sekolah Menengah) Oktober 2020	17	8.3
Seni Visual (SM) Jun 2020	17	8.3
TAHFIZ (Sekolah Menengah) Jun 2020	15	7.3
Location		
Rural (P2 & P3)	19	9.3
Sub-urban (Luar bandar)	135	65.9
Urban (Bandar)	51	24.9
Device		
Desktop and SmartPhone	3	1.5
Laptop	27	13.2
Laptop and SmartPhone	138	67.3
SmartPhone	37	18.0
Platform		
Google Meet	112	54.6
Telegram	15	7.3
Whatsapp	78	38.0

The total number of respondents who were chosen to be representative of the population, comprises seven groups of them who are taking EDUP2112 (Teaching Technology and Media) in Semester II Year 2020/2021 and seven groups taking EDUP2093 (Pedagogy) Semester I Year 2020/2021. Majority of the respondents (35.1%, n=72) are from Pendidikan Islam II (Sekolah Rendah) Jun 2020, followed by respondents from Pendidikan Islam I (Sekolah Rendah) Oktober 2020 (15.6%, n=32). The respondents from Bahasa Melayu (Sekolah Menengah) Oktober 2020 are the minority in this population.

Table 1 shows that the location of schools where the respondents serve. The locations included rural, suburban and urban area. The findings show that majority of the respondents serve in suburban area. Those respondents who serve in suburban area made up the highest percentage of the population 65.9% (n=135). This is followed by the respondents who serve in urban area (24.9%, n=51). There is only 9.3% (n=19) of respondents serving in rural area.

Table 1 also showed the devices used by the respondents. The devices used include desktop, laptop and smart phone. The findings showed that majority of the respondents used both laptop and smart phone. This made up the highest percentage of respondents 67.3% (n=138). There was only 1.5% (n=3) of respondents used both desktop and smart phone.

Table 1 also showed the platforms used by the respondents. The platform used include google meet, telegram and whatsapp. The findings showed that majority of the respondents used GC. This made up the highest percentage of respondents 54.6% (n=112). There was only 7.3% (n=15) of respondents used telegram in teaching and learning.

Table 2
Experience in using GC and internet access

Items	Frequency	Percentage (%)
Experience Using GC		
3 years and above	4	2.0
1-2 years	107	52.2
Less than 1 year	77	37.6
Never	17	8.3
Internet access		
Excellent internet access	5	2.4
Good internet access	40	19.5
Medium internet access	92	44.9
No internet access	9	4.4
Weak internet access	59	28.8

Table 2 showed the experience of the respondents in using GC. Their experience in using GC ranged from never to 3 years and above. The findings showed that majority of the respondents had less than 1 year and 1-2 years of experience in using GC. Those respondents who had 1-2 years of experience made up the highest percentage of respondents (52.2%, n=107). This was followed by the respondents who had less than 1 year of experience in using GC (37.6%, n = 77). There was only 2% (n = 4) of the respondents who had 3 years and above experience in using GC.

PDPP Interim Teachers' Perceptions In Using GC As The VLE

The research instrument collect respondents' perceptions through 20 items in the questionnaire is set based on usefulness, ease of use and interaction in the VLE. There are 8 items on usefulness, 7 items on ease of use and 4 items on interaction. Items 1, 2, 11, 13, 15, 17, 18 and 19 are written based on usefulness. Items 3, 4, 5, 6, 9, 12 and 16 are written based on ease of use and items 7, 8, 10 and 14 are on interaction. The data is analysed to find out the means and standard deviations for usefulness, ease of use and interaction.

Based on Table 3, all scores were above average with the highest mean of 4.02 for the interaction component. The lowest mean value of 3.83 was obtained for the usefulness component. The findings showed that all respondents agreed that GC was useful, easy to use and it helped in interaction among students and teachers.

Table 3
Item Statistics

	Mean	Std. Deviation
Usefulness	3.83	.54
Easy to use	3.87	.58
Interaction	4.02	.61

Though usefulness of GC had scored the lowest mean value in Table 3 above, the mean of each items in Table 4 had proven that the respondents agreed that GC was useful. Item 13 with the mean of 4.21 had shown that most of them strongly agreed that the lecturers were able to share interactive multimedia resources through GC. This was supported by item 18 with the mean of 2.71 that they disagreed with the statement "learning through GC is a waste of time and effort". In addition, they

agreed that GC is interesting, they are not afraid of answering questions asked through GC and they are looking forward to learn.

Table 4
Usefulness of GC

Item No.	Item	Mean
1	I found learning content in a Google Classroom interesting	4.09
2	I was able to learn faster through online resources in a Google Classroom.	3.96
11	Learning through Google Classroom was an enjoyable activity as compared to regular classroom teaching.	3.61
13	The teacher was able to share interactive multimedia resources through Google Classroom.	4.21
15	I could revise my lesson better in a Google Classroom.	3.98
17	I was not afraid of answering questions asked through Google Classroom.	4.05
18	I found learning through Google Classroom to be a waste of time and effort.	2.71
19	I would look forward to learning through a Google Classroom setup	4.06
	Overall Mean	**3.83**

The mean score for each item shown in Table 5 had shown that GC is easy to use. All samples agreed that they were more attentive (item 3 & 4), have pleasant experience (item 6), easy to get resources (item 12), easy to answer questions (item 16) and complete their assignment (item 9) through the use of GC. Among these items, item 9 with the statement "I was able to complete my assignments easily through the Google Classroom setup." scored the highest mean of 4.11.

Table 5
Easy to use Google Classroom

Item No.	Item	Mean
3	I was more attentive while learning in a Google Classroom that what I am in the classroom.	3.62
4	I felt that I was getting better attention in a Google Classroom.	3.58
5	I could follow the subject matter in the Google Classroom from my mobile device.	3.94
6	I had a pleasant experience using Google Classroom from my mobile device.	3.89
9	I was able to complete my assignments easily through the Google Classroom setup.	4.11
12	Online resources provided through Google Classroom were of good quality and related to my curriculum.	3.93
16	I found it easier to answer questions asked in a Google Classroom.	4.01
	Overall Mean	**3.87**

Table 6 has shown the analysis on the component of interaction. Item 10 that stated "the teachers were able to correct the students' assignments and provide them feedbacks in a Google Classroom" scored the highest mean of 4.20. This is followed by item 14 that stated "the teachers were more helpful in a Google Classroom" with the mean of 3.99. Item 7 and 8 with the mean score of 3.97 and 3.93 respectively show that the samples are able to communicate with their classmates and share information easily through GC. Therefore, all samples agreed that GC helps in interaction. Communication between peers are easy and responses given by lecturers are quick. Lecturers are more helpful in GC.

Table 6
Interaction in Google Classroom

Item No.	Item	Mean
7	I was able to communicate with my classmates and share information easily through the Google Classroom.	3.97
8	Responses to questions were provided quickly in a Google Classroom	3.93
10	The teacher was able to correct my assignments and provide me feedback in a Google Classroom.	4.20
14	The teacher was more helpful in a Google Classroom.	3.99
	Overall Mean	

However, most respondents agreed that internet access plays an important role in the use of GC as shown in Table 2. Most of them (44.9%) have medium internet access. Only 2.4 % of the respondents had excellent internet access. 28.8% of the respondents had to face weak internet access problem and 4.4% of them had no internet access at all.

To Investigate Whether Gender Differences Exist While Learning Through The GC

The second research objective was to investigate whether gender differences exist in using GC learning platform at the teacher training institute. Table 7 below showed that there were 121 female and 84 male respondents.

Table 7
t-Test analysis for gender

Gender	N	Mean	SD	F	Nilai-*t*	df	Sig. (2-hujung)
Male	84	3.95	.62	4.041	-1.465	203	.145
Female	121	3.84	.47				

**Signicifance level p<0.05*

Both female and male respondents were independent samples as they came from two completely different populations. Table 7 showed that there is a significant difference between gender in learning through the GC as the platform to carry out the T&L activities.The means and standard deviations for each of the female and male groups are computed followed by a test of significance difference between means (t–test =-1.465, F=4.041) with a significant value 0.145. The data is presented in Table 10 and data analysis has shown that there is no gender differences between female and male samples in using GC as learning platform.

To Investigate Whether Significant Differences Exist Based On The Geographical Location

The third research objective aims to investigate whether significant differences exist based on the geographical location. The data obtained is presented in Table 8 and data analysis showed that the significant value is greater than 0.05. The F value is 1.224 which is significant at 0.296. From the data analysis, it showed that there was no significant difference in using the GC based on the geographical location of teachers.

Table 8
ANOVA analysis based on the geographical location

Location	N	Mean	SD	df	F	Sig
Rural (P2 & P3)	19	3.71	.62			
Sub-urban (Luar bandar)	135	3.91	.54	2	1.224	.296
Urban (Bandar)	51	3.88	.51			

DISCUSSION

GC is a web-based tool in Google Apps for education especially during the period of pandemic COVID-19. BLTEI has to use GC to conduct teaching and learning activities to keep teaching and learning process on going. This research presents the outcomes of using GC as learning tools for interim teachers in BLTEI who had taken EDUP2112 and EDUP2093 courses. A set of questionnaire in Google Form was used to collect quantitative data. The instrument is adapted from researches carried out by Adit Gupta and Pooja Pathania (2020) and Kok (2020). The results show that the students have positive perception on the use of GC as learning platform. This is supported by the findings in the research done by Ansong-Gyimah (2020) that perceived usefulness and perceived ease of use were significant in predicting users' attitude towards using GC. Ease of use in Kuo et al. (2014) has indicated that GC was easy to log in and easy to access through GC apps installed in the handphone. The data has also shown that GC was useful in helping students to do tasks on time. The research also found that GC could develop students' motivation, spirit and self-study ability. Students think about ideas, knowledge and information received during their interaction with online content. The findings also show that there is significant difference on gender but no significant difference on geographical locations in using GC as the learning platform.

Overall, the three objectives of this research have been achieved. The results of the present research are in line with the results reported in earlier researches conducted by Sukamawati and Nensia (2019), Iliyasu Hussaini et al. (2020), Demian and Morrice (2012), and Hidayat et al. (2019). The present research provides valuable insights regarding the use of GC in BLTEI and successfully reported the PDPP interim students' perceptions, differences between gender and geographical locations of the students in using GC as learning tools.

CONCLUSIONS

GC is the main online platform used for BLTEI virtual learning during Pandemic Covid-19. Findings from this research have shown that students are positive towards the used of GC for online learning even though some of them might have little experience in using it. Data also showed that gender and locations do not affect students' online learning through GC. This is in line with the ubiquitous concept of learning regardless of the locations as long as internet access is available. Overall, the objectives of this research have been achieved. It can be concluded that online learning is effective and students are positive towards learning using GC. The main contribution of this research is empirical findings on PDPP Interim Teachers' perceptions in using GC as virtual online learning platform during Pandemic Covid-19. Future research can explore more on the best practices for online learning through GC for PDPP Interim Teachers with different internet access.

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PERSEPSI GURU PELATIH TERHADAP KURSUS KEUPAYAAN KEWANGAN

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ABSTRAK

Kajian ini dilaksanakan untuk mengenal pasti persepsi guru pelatih terhadap kursus Keupayaan Kewangan KKWK3013 secara atas talian selepas mereka selesai menghadiri kursus ini sebagai kursus elektif terbuka. Fokus utama kajian ini ialah kesedaran guru pelatih terhadap pelbagai aspek kewangan. Responden kajian terdiri daripada 65 orang guru pelatih PISMP Ambilan Jun 2018 dan 2019 yang berpengkhususan Bahasa Melayu, TESL, Sejarah, dan Bahasa Cina. Kajian berbentuk tinjauan digunakan dan soalan dikemukakan melalui pelantar *Google Form*. Soalan tertutup dengan Skala Likert 4 poin dan soalan terbuka dikemukakan. Dapatan menunjukkan bahawa skor min bagi kesemua soalan tertutup berada pada aras melebihi 3.70 dan skor min keseluruhan 3.79. Dapatan daripada soalan terbuka boleh dikategorikan kepada enam (6) tema utama. Implikasi kajian ini ialah tindakan lanjut perlu diambil oleh pihak berkepentingan dalam meningkatkan pendedahan dan pengetahuan serta kemahiran pengurusan kewangan kepada rakyat bermula dari awal persekolahan sehingga ke peringkat pengajian tinggi. Pendedahan ini juga boleh diperluaskan melalui pelbagai saluran lain seperti sosial media kepada belia muda khasnya dan rakyat keseluruhannya.

Kata kunci: keupayaan kewangan, kesedaran aspek kewangan, guru pelatih, atas talian

ABSTRACT

This study was conducted to identify trainee teachers' perceptions of the online KKWK3013 Financial Capability course after they completed the course as an elective course. The main focus of this study is trainee teachers' awareness of various financial aspects. The respondents consisted of 65 trainee teachers from the the PISMP program June 2018 and 2019 intakes who were majoring in Malay Language, TESL, History, and Chinese Language. A survey method was used, and questions were presented via the Google Form platform. Closed-ended questions with a 4-point Likert Scale and open-ended questions were presented. Findings indicated that the mean scores for all closed-ended questions were above 3.70, and the overall mean score was 3.79. Findings from open-ended questions could be categorized into six (6) main themes. The implications of this study are that further action needs to be taken by stakeholders to enhance exposure, knowledge, and financial management skills for citizens starting from early schooling to

higher education levels. This exposure can also be expanded through various other channels such as social media, particularly targeting youth and the citizens in general.

Keywords: *financial capability, awareness of financial aspects, trainee teachers, online*

PENGENALAN

Pengetahuan dan kemahiran pengurusan kewangan yang merangkumi pelbagai aspek pengaplikasiannya adalah teramat penting dalam memastikan kesejahteraan kewangan dan menjadi salah satu faktor penting kesejahteraan kehidupan. Usaha kerajaan khasnya Kementerian Pendidikan Malaysia (KPM) telah mengorak langkah dengan menekankan elemen kewangan dalam Kurikulum Standard Sekolah Rendah (KSSR) dan dibukukan dalam Dokumen Standard Kurikulum Pentaksiran (DSKP) Matematik dari tahun 1 hingga tahun 6. Pada dasarnya, penekanannya lebih pada topik-topik pembelajaran wang secara langsung dan pada masa yang sama, secara tidak langsung dengan merentasi kurikulum. Pengaplikasian elemen pendidikan kewangan bertujuan untuk membentuk generasi masa depan yang berkebolehan dalam membuat keputusan kewangan yang betul, amalan etika dan kemahiran pengurusan kewangan yang bertanggungjawab. Elemen-elemen ini boleh diaplikasikan dalam pengajaran dan pembelajaran secara langsung atau tidak langsung. Pengaplikasian secara langsung adalah melalui topik-topik pembelajaran yang mempunyai elemen kewangan secara eksplisit seperti pengiraan faedah ringkas dan faedah tertunggak (*simple interest and compound interest*). Pengaplikasian secara tidak langsung boleh dilaksanakan dengan merentasi kurikulum melalui topik lain dalam mata pelajaran lain. Pendedahan kepada pengurusan kewangan dalam kehidupan harian adalah penting dalam membekalkan pengetahuan, kemahiran dan nilai yang diaplikasikan secara efektif dan bermakna (KPM, 2016b).

Dalam DSKP KSSR Matematik Tahun 1, elemen kewangan telah mula diterapkan dalam Topik 4: Wang. *Learning Standard 4.2.1: Identify financial resources and savings. Learning Standard: 4.2.2 Record savings and expenses from the financial resources* (KPM, 2016a). Dalam DSKP KSSR Matematik Tahun 2, salah satu elemen merentas kurikulum (EMK) yang diterapkan ialah pendidikan kewangan (*Finance Education*). Dalam DSKP KSSR Matematik Tahun 2, elemen simpanan dan pelaburan diterapkan dalam Topik 4: Wang. *Learning Standard 4.6.1: Manage finances effectively as basic of savings and spending*. (KPM, 2016b). Dalam DSKP KSSR Matematik Tahun 3, elemen simpanan dan pelaburan (*savings and investments*) diterapkan dalam Topik 4: Wang. *Learning Standard 4.7.1: Explain needs and wants as a basis for saving and expenditure/spending, Learning Standard 4.7.2: Explain the needs for savings and investments* (KPM, 2017a). Dalam DSKP KSSR Matematik Tahun 4, elemen kewagan diterapkan dalam Topik 3: Wang. *Content Standard 3.3: Financial management, 3.4: Responsibility in making financial decisions, 3.6: Payment instruments* (KPM, 2018). Dalam DSKP KSSR Matematik Tahun 5, elemen kewangan diterapkan dalam Topik 10: Wang. *Learning Standard 10.8 (i): State the needs to understand simple interest and compound interest of saving, Learning Standard 10.8 (ii): Plan daily, weekly and monthly budget to achieve a short term financial target* (KPM, 2016c). Dalam DSKP KSSR Matematik Tahun 6, elemen kewangan diterapkan dalam Topik 5: Wang. *Learning Standard 5.1 (i): State the meaning of profit and loss, discount, cost price, selling price, bill invoice, rebate, asset and liability, interest and service tax, Learning Standard 5.1 (ii): Solve daily problems involving profit and loss, discount, cost price, selling price, bill, invoice, rebate, asset and liability, interest and service tax* (KPM, 2017b).

Secara keseluruhannya, adalah jelas bahawa pendedahan awal pengurusan kewangan di sekolah rendah di negara kita adalah berperingkat bermula dari mengenal pasti sumber kewangan dan simpanan, pengurusan kewangan secara efektif sebagai asas simpanan dan perbelanjaan, simpanan dan pelaburan, pengurusan kewangan secara berhemah dan bertanggungjawab dalam membuat

keputusan kewangan, pengiraan faedah dan penyediaan belanjawan (*budgeting*), akhirnya kepada pengetahuan tentang maksud keuntungan dan kerugian, diskaun, harga kos, aset dan liabiliti.

Usaha baik ini diteruskan di peringkat institusi pendidikan tinggi (IPT) seperti Institut Pendidikan Guru (IPG). Namun, aspek kewangan yang didedahkan di peringkat ini adalah lebih meluas. Kursus Keupayaan Kewangan (Kod kursus: KKWK3013) adalah satu kursus yang ditawarkan di IPG untuk guru-guru pelatih sebagai satu kursus Elektif Terbuka. Kursus ini memberi peluang kepada guru pelatih supaya menguasai pengetahuan dan kemahiran pengurusan kewangan peribadi yang efektif dan membuat keputusan kewangan yang bijak. Kursus ini merangkumi aspek-aspek penting pengurusan kewangan bagi menghadapi cabaran kewangan semasa dan masa depan. Antara aspek yang dibincangkan adalah pengenalan kepada celik kewangan; sumber pendapatan dan kerjaya; tanggungjawab dan membuat keputusan kewangan; pengurusan dan perancangan kewangan; simpanan dan pelaburan; pengurusan kredit dan hutang; pengurusan risiko dan insurans; serta isu dan trenda kewangan semasa. Kursus in diharapkan dapat membangunkan kemahiran pengetahuan dan keyakinan untuk menjadi lebih arif mengenai risiko dan peluang kewangan serta dapat membuat pilihan yang bijak. (IPGM, 2015).

PERSOALAN KAJIAN

Persoalan kajian yang utama ialah “Apakah persepsi guru pelatih terhadap kursus Keupayaan Kewangan?”. Pada masa yang sama, kajian ini juga bertujuan mengenal pasti jawapan kepada persoalan-persoalan berikut:

a. Apakah persepsi guru pelatih terhadap persetujuaan kesedaran pengurusan kewangan selepas menghadiri kursus Keupayaan Kewangan KKWK3013?
b. Apakah persepsi guru pelatih terhadap keperluan pendedahan pengetahuan dan kemahiran pengurusan kewangan kepada murid-murid sekolah rendah pada peringkat awal ? Berikan hujah dan alasan.

KAJIAN LITERATUR

Pengurusan kewangan yang baik merupakan suatu kemahiran hidup yang sangat penting dalam menjamin keupayaan kewangan individu dan seterusnya membawa impak kepada kesejahteraan hidup diri dan keluarga serta masyarakat. Namun begitu, kemahiran pengurusan kewangan sangat dipengaruhi oleh faktor-faktor dalaman dan luaran. Faktor-faktor dalaman adalah seperti amalan membuat simpanan dan pelaburan, pengurusan risiko dan insurans serta kesedaran kewujudan akta-akta perlindungan sebagai pengguna kemudahan dan tingkah laku perbelanjaan individu. Faktor-faktor luaran adalah seperti pendedahan kemahiran pengurusan kewangan, pendidikan pengurusan kewangan, perubahan ekonomi, isu dan trenda kewangan semasa. Walau bagaimanapun, pendedahan dan pendidikan awal tentang pengurusan kewangan adalah satu faktor yang membawa kepada kesan berpanjangan dan berterusan. Dengan pendedahan dan pengetahuan serta kemahiran tentang pengurusan kewangan, maka secara tidak langsung kesedaran tentang ancaman dan risiko kewangan akan dapat ditingkatkan dan seterusnya mengelak diri daripada terjebak dalam ancaman dan risiko tertentu.

Simpanan dan Pelaburan

Amalan membuat simpanan wang adalah teramat penting walaupun pendapatan individu adalah kecil. Pengurusan kewangan yang lemah menjadi salah satu punca gagal membuat simpanan wang.

Pengurusan kewangan yang lemah disebabkan oleh beberapa faktor seperti mengamalkan perbelanjaan tidak terancang serta kurangnya disiplin diri selain daripada pendapatan yang kecil (Mohd Nasaruddin Parzi, 2020). Pengurusan kewangan yang lemah juga tercemin pada simpanan bagi 3.6 juta ahli KWSP kurang daripada RM1000 manakala 6.1 juta lagi kurang daripada RM10000 (Muhammad Yusri Muzamir, 2022). Dalam satu persidangan Dewan Negara, Timbalan Menteri Kewangan Mohd Shahar Abdullah menyatakan bahawa terdapat seramai 3.20 juta ahli KWSP berumur di bawah 55 tahun berdepan dengan tahap simpanan yang amat kritikal iaitu kurang daripada RM1000. Setakat 30 Jun 2022, seramai 6.62 juta ahli KWSP atau 52% daripada 12.78 juta keseluruhan ahli KWSP berumur di bawah 55 tahun mempunyai simpanan kurang daripada RM10000 (Firdaus Azil, 2022). Pada hakikatnya, menyimpan wang penting untuk mendapatkan kualiti hidup yang lebih baik. Justeru itu, kesedaran menabung atau menyimpan wang harus ditingkatkan dan dijadikan budaya dalam kehidupan seharian demi menjamin kesejahteraan dan kesenangan kewangan pada masa depan.

Pelaburan juga merupakan salah satu langkah pengumpulan wang yang boleh dipertimbangkan oleh semua orang. Namun begitu, ramai orang tidak tahu konsep pelaburan, manfaat pelaburan, bagaimana cara mengurangkan risiko pelaburan dan seterusnya ialah mengenali skim pelaburan penipuan atau palsu. Oleh itu, maklumat-maklumat ini boleh disalurkan melalui pendidikan seperti dalam kursus Keupayaan Kewangan yang memberi peluang dan pendedahan kepada para siswazah. Salah satu sumber maklumat ini ialah portal rasmi kerajaan *MyGovernment* di alamat https://www.malaysia.gov.my/portal/index. Kita bukannya belajar untuk menjadi sangat mahir tetapi sekurang-kurangnya mengenali, mengetahui dan bertindak mengelakkan diri menjadi mangsa penipuan. Pada masa yang sama, pelaburan menjadi salah satu kaedah penyimpanan wang dan simpanan tersebut boleh digunakan untuk keperluan masa-masa kecemasan dan juga masa depan yang tidak menentu khasnya perubahan ekonomi.

Pengurusan Risiko dan Insurans

Kemahiran pengurusan risiko dari aspek kewangan juga amat penting dalam menjamin kelangsungan hidup terutamanya apabila berlakunya kemelesetan ekonomi secara global dan juga risiko-risiko yang di luar jangkaan. Ini jelas apabila ramai orang terkesan daripada penularan COVID-19. Dalam satu kajian khas oleh Jabatan Perangkaan Malaysia, didapati responden yang bekerja sendiri (35.5%) dan majikan (28.3%) mengalami perubahan pendapatan bulanan yang diterima berkurang sehingga pengurangannya melebihi 90 peratus. Sebanyak 71.4% responden yang bekerja sendiri mempunyai simpanan yang mencukupi bagi tempoh kurang daripada satu bulan (Jabatan Perangkaan Malaysia, 2020). Salah satu punca utama kepada keadaan ini adalah disebabkan pandemik COVID-19. Ramai orang dan keluarga mengalami kesukaran kewangan dalam menampung perbelanjaan dan keperluan harian. Perkara yang tidak dijangka berlaku akan menjejaskan gaya hidup dan kualiti hidup terutamanya apabila pendapatan isi rumah terjejas. Keadaan seperti landaan COVID-19 telah memberi satu pendedahan betapa pentingnya amalan simpanan dan pengurusan kewangan yang bijak pada masa-masa senang untuk menangani masa-masa sukar.

Pengurusan Kredit dan Hutang

Kadar peningkatan golongan muda yang terlibat dalam masalah kewangan seperti muflis adalah membimbangkan di negara kita seperti yang dilaporkan oleh Bank Negara Malaysia (BNM). Satu kajian oleh Bank Dunia mendapati 60 peratus muflis di negara kita adalah daripada gologan muda yang berumur 25 hingga 44 tahun ekoran daripada tabiat berbelanja melebihi pendapatan (Nasuha Badrul Huzaini, 2019). Antara punca utama muflis adalah kekurangan pengetahuan dan kawalan diri dalam pengurusan kewangan. Golongan muda cenderung berhutang ketika berada di institusi pengajian tinggi dan awal pekerjaan. Mereka mula mengejar gaya hidup yang banyak menelan perbelanjaan di luar kemampuan dan juga mula membeli aset seperti kenderaan dan rumah. Perkara yang lebih membimbangkan ialah mereka membuat pinjaman bagi tujuan penggunaan peribadi dan bukannya untuk pelaburan dan pengumpulan kekayaan. Ia berlaku dalam kalangan peminjam muda yang mempunyai

pengetahuan kewangan yang terhad. Tanggungan hutang seperti ini jika tersilap dalam percaturan perbelanjaan akan mudah terdedah atau terperangkap dalam situasi kesulitan dan ketidaksejahteraan kewangan sehingga muflis pada usia muda. Perkara ini mudah berlaku kerana kegagalan membayar balik pinjaman seperti pinjaman peribadi dan kad kredit yang meningkat sebanyak 104 peratus dan 43 peratus masing-masing pada 2018 berbanding 2012. Pengetahuan kewangan sememangnya mempengaruhi amalan pengurusan kewangan seperti dapatan dalam kajian oleh Salbiah Nur Sharul Azmi et al. (2018) yang khusus ke atas responden dalam kalangan mahasiswa.

Kesedaran Risiko Privasi dan Kewujudan Akta Perlindungan

Kajian Marziah Mokhtar et al. (2020) mendapati ramai dalam kalangan anak muda Malaysia lebih gemar dan memilih untuk membeli belah atas talian. Antara faktor yang mempengaruhi tingkah laku pembelian tersebut ialah faktor kemudahan (*convenience*). Mereka berpendapat bahawa pembelian atas talian menjimatkan masa, boleh dilakukan bila-bila masa sahaja dan amat mudah dilaksanakan. Dari segi faktor risiko, kajian ini juga mendapati bahawa 55.7% daripada responden kajian tidak bersetuju bahawa pembelian atas talian itu berisiko. Walau bagaimanapun, 67.9% daripada responden kajian bersetuju bahawa penjual atas talian berkemungkinan adalah penipu (*scammer*). Lanjutan daripada pembelian atau transaksi atas talian, maka maklumat peribadi adalah mudah terdedah kepada umum khasnya kepada pihak ketiga dan menyalahgunakannya. Kajian oleh Neeraj Mathur (2015) mendapati 65% bersetuju bahawa terdapat risiko kebocoran maklumat peribadi mereka semasa pembelian atas talian manakala 35% responden tidak bersetuju dengannya.

Orang ramai masih kurang kesedaran tentang kewujudan akta dan undang-undang siber yang boleh dirujuk. Ini jelas dalam kajian oleh Muhammad Adnan Pitchan dan Siti Zobidah Omar (2019) mendapati terdapat responden tidak mengambil kisah tentang aspek undang-undang siber kerana berpendapat bahawa hanya orang yang mahir dalam bidang ICT sahaja perlu mengetahui dan mempunyai kesedaran keselamatan siber serta kewujudan undang-undang siber. Memang tidak dapat dinafikan bahawa agak sukar untuk membanteras masalah jenayah siber jika hanya bergantung kepada undang-undang yang sedang berkuatkuasa. Ianya amat bergantung kepada kawalan diri, kempen kesedaran dan pendidikan (Mohamad Rizal, 2020).

Antara akta perlindungan yang diwujudkan di negara kita ialah Akta Perlindugan Data Peribadi 2010 (Akta 709) di bawah Jabatan Perlindungan Data Peribadi, Kementerian Komunikasi dan Multimedia Malaysia. Akta ini yang juga dikenali sebagai APDP merupakan salah satu perundangan siber yang diperakukan dalam pelaksanaan Koridor Raya Multimedia bagi menjamin keselamatan maklumat dan kebolehpercayaan serta keutuhan rangkaian dalam perlindungan data di Malaysia. Ianya telah dikuatkuasakan pada 15 November 2013. Akta ini terpakai kepada organisasi/individu yang memproses data peribadi dalam transaksi komersial contohnya bank, syarikat telekomunikasi, insurans, hospital dan sebagainya. Perlindungan ini amatlah penting khasnya apabila berlakunya kebocoran maklumat data peribadi bagi pengguna yang terbiasa berurusan perbankan atas talian dalam kehidupan harian seperti pembelian barang dan penggunaan kad kredit atau debit. Jenayah komersial boleh berlaku apabila terdapat pihak yang tidak bertanggungjawab menyalahgunakan data peribadi seperti akaun bank, kad kredit, nombor kad pengenalan pengguna dan nombor telefon dalam aktiviti penipuan (Pejabat Pesuruhjaya Perlindungan Data Peribadi Malaysia, 2019). Oleh itu, pengetahuan tentang hak dan akta perlindungan amatlah penting disalurkan kepada orang ramai melalui saluran-saluran tertentu seperti kurikulum di sekolah dan di institutsi pengajian tinggi untuk belia dan juga platform seperti media sosial untuk orang ramai. Orang ramai perlu ada pengetahuan bahawa tidak mudah mendedahkan data peribadi kepada pihak lain yang tidak berkaitan dan tidak menyakinkan untuk didedahkan. Begitu juga, tidak mudah terpedaya dengan taktik-taktik penipuan terutamanya atas talian seperti meminta nombor kad pengenalan untuk menebus hadiah yang tersedia atau dimenangi oleh seseorang itu. Bagaimana hendaknya kita meningkatkan kesedaran dalam kalangan masyarakat dan membanteras jenayah-jenayah ini? Salah satu caranya ialah melalui pendidikan.

METODOLOGI

Kajian ini menggunakan kaedah tinjauan dengan mengemukakan soalan soal selidik secara atas talian melalui pelantar *Google Form* kepada guru-guru pelatih yang telah selesai melengkapkan kursus KKWK3013. Terdapat tiga bahagian dalam soal selidik tersebut yang terdiri daripada Bahagian A: Dermografi responden; Bahagian B: Soalan a hingga g pernyataan persetujuan; Bahagian C: Soalan 1 adalah soalan berbentuk pernyataan Ya/Tidak manakala soalan 2 adalah soalan respon terbuka. Soalan - soalan ini dibentuk berdasarkan kandungan kursus dan juga tugasan kursus yang digariskan dalam Ringkasan Maklumat Kursus (RMK). Skala Likert 4 - Poin digunakan untuk soalan-soalan di Bahagian B manakala soalan pernyataan Ya/Tidak dan respon terbuka digunakan di Bahagian C. Kaedah tinjauan digunakan atas kemudahan maklumat dipungut secara terus daripada responden dalam masa yang singkat dan sesuai dengan tujuan kajian.

Skala Likert 4-Poin (1- Sangat Tidak Setuju, 2- Tidak Setuju, 3- Setuju, 4-Sangat Setuju) digunakan dalam kajian ini atas pertimbangan mengelakkan responden menyalahgunakan titik tengah (midpoint) seperti mana dalam Skala Likert 5-Poin (Seung, 2017). Penggunaan skala 4-poin dengan mengeluarkan titik tengah (*midpoint*) atau pendapat neutral (*neutral opinion*) adalah sesuai memandangkan responden kajian ini tidak menghadapi tekanan sosial atau kesukaran menyatakan pandangan mereka kerana soalan - soalan kajian tidak menyentuh isu-isu sensitif atau boleh meletakkan mereka dalam situasi yang sukar dan merbahaya. Sebaliknya, responden berkemungkinan menggunakan titik tengah (dalam skala 5 poin) sebagai satu cara memberikan respon yang lebih mudah diterima oleh masyarakat atau mereka tidak berminat dengan isu kajian. Oleh itu, kajian ini menggunakan skala 4-poin setelah mempertimbangkan logik dan kesesuaiannya untuk tajuk kajian ini.

Kajian ini mengumpul kedua-dua jenis data kuantitatif dan kualitatif. Dengan ini, data di Bahagian A dianalisis dalam bentuk peratusan, data di Bahagian B dianalisis dalam bentuk skor min manakala data di Bahagian C dianalisis secara kualitatif bertema.

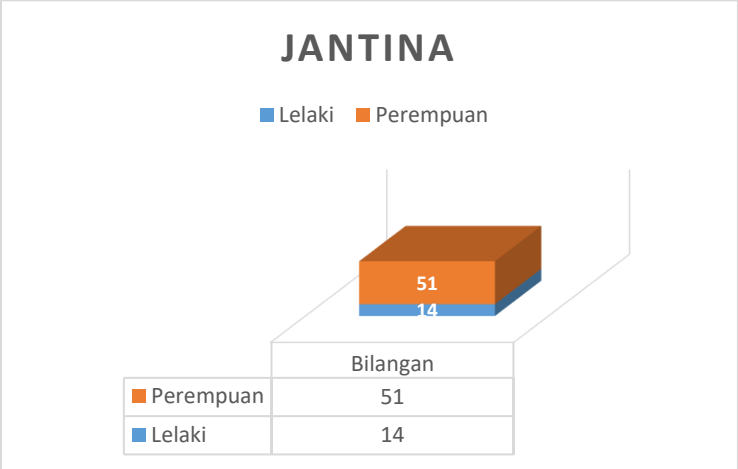
Responden Kajian

Responden kajian terdiri daripada 65 orang guru pelatih PISMP Ambilan Jun 2018 dan 2019 berpengkhususan Bahasa Melayu, TESL, Sejarah, dan Bahasa Cina. Mereka telah lengkap mengambil kursus Keupayaan Kewangan, KKWK3013 sebagai salah satu kursus elektif terbuka.

Demografi Responden

Terdapat 65 orang responden yang mengambil bahagian dalam kajian ini. Antaranya ialah 14 orang guru pelatih lelaki (21.5%) dan 51 orang guru pelatih perempuan (78.5%). Rajah 1 menunjukkan komposisi jantina responden.

Rajah 1
Komposisi Jantina Responden



PERBINCANGAN

Dapatan Persoalan Kajian 1:

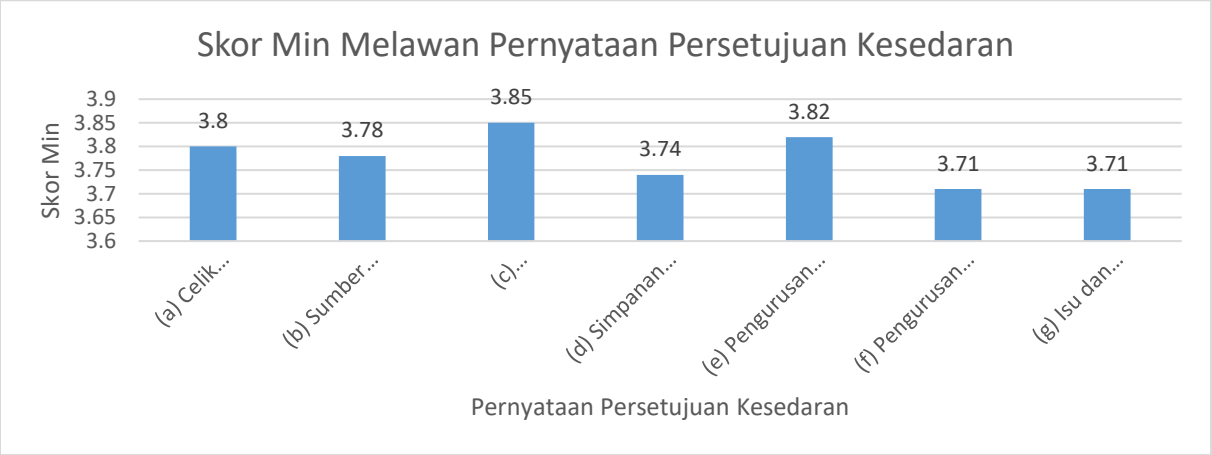
Berdasarkan hasil analisis data, didapati semua responden menyambut baik dengan penawaran kursus Keupayaan Kewangan KKWK3013 sebagai salah satu kursus elektif terbuka di peringkat IPG. Ini jelas daripada respon mereka terhadap tujuh (7) pernyataan yang dikemukakan yang memerlukan responden menjawab mengikut tahap persetujuan mereka dalam 4 skala iaitu 1- Sangat Tidak Setuju, 2- Tidak Setuju, 3- Setuju dan 4-Sangat Setuju. Jadual 1 menunjukkan skor min bagi setiap pernyataan persetujuan kesedaran.

Jadual 1
Skor min mengikut pernyataan persetujuan kesedaran

Pernyataan Persetujuan Kesedaran	Skor Min
(a) Celik kewangan	3.80
(b) Sumber pendapatan dan kerjaya	3.78
(c) Tanggungjawab dan membuat keputusan kewangan	3.85
(d) Simpanan dan pelaburan	3.74
(e) Pengurusan kredit dan hutang	3.82
(f) Pengurusan risiko dan insurans	3.71
(g) Isu dan trenda kewangan semasa	3.71

Data menunjukkan ketujuh-tujuh pernyataan berada pada aras melebihi skor min 3.70 iaitu di antara skala 3 (Setuju) dan skala 4 (Sangat setuju). Selepas para guru pelatih didedahkan dengan pelbagai pengetahuan tentang keupayaan kewangan dalam kursus KKWK3013, mereka berpendapat bahawa kesedaran mereka terhadap 'Tanggungjawab dan membuat keputusan kewangan' adalah paling tinggi, seterusnya diikuti dengan 'Pengurusan kredit dan hutang', 'Celik kewangan', 'Sumber pendapatan dan kerjaya', 'Simpanan dan pelaburan', 'Pengurusan risiko dan insurans' dan 'Isu dan trenda kewangan semasa'. Rajah 2 menunjukkan skor min bagi setiap pernyataan persetujuan kesedaran.

Rajah 2
Skor Min Bagi Setiap Pernyataan Persetujuan Kesedaran



Dapatan Persoalan Kajian 2:

Kesemua responden bersetuju bahawa adalah menjadi satu keperluan untuk mendedahkan pengetahuan dan kemahiran pengurusan kewangan kepada murid-murid sekolah rendah pada peringkat awal. Daripada hasil analisis hujah dan alasan responden, data dapat dikategorikan kepada enam (6) tema utama seperti berikut:

Tema 1: Celik kewangan harus dipupuk dari awal.
Kanak-kanak seperti murid sekolah rendah telah mempunyai wang saku yang diberikan oleh ibu bapa untuk perbelanjaan di sekolah. Mereka juga mempunyai pengalaman melakukan transaksi wang. Oleh itu, golongan ini perlu didedahkan dengan kemahiran pengurusan wang supaya menggunakan wang dengan betul dan bersesuaian dan seterusnya menjadi asas pemupukan celik kewangan dari awal zaman persekolahan dan ke peringkat dewasa seterusnya.

Tema 2 : Persediaan menempuh zaman dewasa.
Kanak-kanak perlu bersedia menempuh zaman dewasa dan kesedaran kepentingan menabung (mempunyai simpanan wang) dan pelaburan. Ini umpama sediakan payung sebelum hujan kerana simpanan wang amat diperlukan untuk kegunaan masa-masa kecemasan dan masa depan. Menurut Institut Penyelidikan Khazanah, hanya 11% rakyat Malaysia yang mempunyai simpanan yang cukup untuk menghadapi kegawatan ekonomi (AIA, 2022). Seseorang itu perlu berdisiplin dengan menyimpan sejumlah wang dari gaji bulanan walaupun dalam jumlah yang kecil. Begitu juga dengan kanak-kanak yang mempunyai wang belanja perlu mengamal dan memupuk sikap menabung. Amalan baik ini dapat diteruskan ke zaman dewasa yang mempunyai peluang yang lebih terbuka untuk melabur dalam pelbagai jenis pelaburan di pasaran sama ada untuk jangka panjang atau jangka pendek, unit amanah, saham hartanah, Bon, Real Estate Investment Trust (REIT), insurans dan Skim Persaraan Swasta (SPS) seperti KWSP.

Tema 3: Membezakan antara keperluan dan kehendak.
Dengan adanya pendedahan awal tentang pengurusan kewangan dan kepentingan pengurusan kewangan dengan baik dan bijak, maka mereka juga dapat membezakan antara keperluan dan kehendak dan mengamalkan sikap berjimat cermat. Dengan kata lain, mereka dapat mengendalikan wang secara berhemah walaupun hanya mempunyai wang saku yang kecil kuantitinya. Menurut Profesor Kanan Fakulti Ekonomi dan Perniagaan Universiti Malaysia Sarawak (UNIMAS), Prof Datuk Dr Shazali Abu Mansor, terdapat perbelanjaan yang boleh dikurangkan atau tidak diperlukan seperti membeli kereta

dan telefon bimbit baharu yang dianggap sebagai satu keperluan. Adalah penting untuk rakyat dididik dengan budaya menabung sejak kecil lagi dan bukannya ketika mereka sudah mencapai usia dewasa (Mohd Nasaruddin Parzi, 2020).

Tema 4: Elakkan peningkatan muflis dalam kalangan belia.
Peningkatan muflis atau bankrupsi adalah satu fenomena yang membimbangkan. Oleh itu, pendedahan awal tentang faktor muflis, risiko dan kesan daripada muflis amat penting dalam meminimakan kejadiannya terutamanya dalam kalangan belia. Sasaran ini boleh dicapai terutamanya apabila murid-murid didedahkan dengan risiko perbelanjaan yang tidak berhemah dan juga sikap suka berhutang di luar kemampuan diri dari segi ekonomi. Ini dapat mengelakkan mereka daripada bankrupsi pada usia muda terutamanya apabila mereka berada di awal kerjaya. Kebanyakan golongan belia mula membuat pinjaman bank untuk pembelian kereta dan rumah apabila mereka mula menjejak kaki di alam pekerjaan. Jika tidak ada pendedahan awal pengetahuan dari segi pinjaman dan hutang, maka kemungkinan akan menjadi satu masalah besar dalam kalangan belia khasnya.

Tema 5: Elakkan diri daripada terjebak dalam mana-mana isu kewangan yang negatif.
Pendedahan awal tentang isu-isu kewangan yang negatif boleh menjadi satu pengisian maklumat yang penting untuk murid-murid. Isu-isu kewangan yang negatif seperti penyalahgunaan kad kredit boleh menjadi satu bebanan yang serius. Penggunaan kad kredit adalah untuk memudahkan urusan pembayaran dan bukan bermaksud seseorang itu memiliki sejumlah wang seperti mana yang terdapat pada kad debit. Pengguna kad kredit boleh terjebak dalam masalah kewangan jika gagal membuat pembayaran minimum yang akhirnya mengenakan faedah yang semakin bertambah dan jumlah tertunggak.

Tema 6: Sedar bahawa bukan senang untuk mendapat wang dan sumber yang sah di sisi undang-undang.
Dalam kursus KKWK3013, guru pelatih didedahkan dengan sumber pendapatan dan sumber pendapatan alternatif. Mereka juga didedahkan dengan jenis-jenis sumber pendapatan yang sah di sisi undang-undang. Implikasi tahap pendidikan ke atas pendapatan dan seterusnya mempengaruhi kualiti kehidupan juga antara isi pelajaran kursus ini. Pendedahan dan maklumat seperti ini amat berguna kepada belia dalam merangka corak kehidupan mereka dan juga mengingatkan mereka bahawa bukan senang untuk mendapat wang dan sumber pendapatan jika tanpa usaha gigih dan juga berpegang pada prinsip hidup dengan sumber pendapatan yang sah di sisi undang-undang.

KESIMPULAN

Persepsi guru pelatih terhadap kursus Keupayaan Kewangan adalah sangat positif. Hasil kajian menunjukkan tahap persetujuan yang sangat tinggi dalam kalangan guru pelatih bahawa kursus ini amat membantu dari segi peningkatan kesedaran tentang hal-hal pengurusan kewangan. Mereka juga amat bersetuju bahawa murid-murid sekolah perlu didedahkan dengan pengetahuan dan kemahiran pengurusan kewangan terutamanya pada peringkat usia awal mereka. Generasi muda perlu dibimbing supaya bijak menguruskan kewangan mereka demi kesejahteraan kewangan dan kesejahteraan hidup. Jika tiada pengurusan secara bijak dari segi kewangan, maka akan timbul banyak masalah yang berkait rapat dengan kewangan seperti penipuan, muflis dan rasuah yang akan mengancam kesejahteraan hidup seseorang individu itu malah kepada ahli-ahli keluarga dan seterusnya kepada masyarakat dan negara secara keseluruhannya.

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TAHAP PENGUASAAN KEMAHIRAN INSANIAH PELAJAR KELUARAN IPG KAMPUS BATU LINTANG BAGI PISMP AMBILAN JUN 2015 DAN JUN 2016

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ABSTRAK

Kajian tinjauan telah dijalankan untuk meninjau tahap kemahiran insaniah dalam kalangan bekas pelajar Institut Pendidikan Guru Kampus Batu Lintang (IPGKBL) yang telah ditempatkan di sekolah. Kajian ini telah dijalankan ke atas 118 orang responden daripada Program Ijazah Sarjana Muda Perguruan (PISMP) Ambilan Jun 2015 dan Jun 2016 yang telah ditempatkan di sekolah-sekolah. Responden dipilih melalui persampelan rawak berkelompok. Kemahiran insaniah terdiri daripada tujuh kemahiran iaitu kemahiran kognitif, nilai, etika dan profesionalisme, kepimpinan, autonomi dan tanggungjawab, komunikasi, personal, interpersonal dan digital. Data kajian dianalisis secara deskriptif dengan menggunakan perisian Statistical Package for the Social Sciences (SPSS) 21.0. Dapatan kajian menunjukkan skor min tahap penguasaan kemahiran insaniah adalah tinggi (min=4.05, sp=.205). Kemahiran insaniah yang menunjukkan skor min yang paling tinggi ialah kemahiran nilai, etika dan profesionalisme (min=4.13, sp=.193). Seterusnya, diikuti oleh kemahiran kognitif (min=4.10, sp=.293), kemahiran kepimpinan, autonomi dan tanggungjawab (min=4.06, sp=.306), kemahiran interpersonal (min=4.05, sp=.305, kemahiran personal (min=4.05, sp=.294), kemahiran komunikasi (min=4.00, sp=.285) dan kemahiran digital (min=3.98, sp=.3668). Kesimpulannya, skor min tahap penguasaan kemahiran insaniah dalam kalangan guru baharu lepasan IPGKBL adalah tinggi.

Kata Kunci: kemahiran insaniah, pelajar IPGKBL, PISMP

ABSTRACT

A survey study was conducted to study the soft skills level among former students of the Batu Lintang Campus Teacher Education Institute (Institut Pendidikan Guru Kampus Batu Lintang, IPGKBL) who were posted to schools. This study involved 118 respondents from the Bachelor of Teaching Degree Program (Program Ijazah Sarjana Muda Perguruan, PISMP) June 2015 and June 2016 intake. Respondents were selected via cluster random sampling. There are seven soft skills which are cognitive

skills, values, ethics and professionalism, leadership, autonomy and responsibility, communication, personal, interpersonal and digital. The data was analyzed descriptively by using the Statistical Package for the Social Sciences (SPSS) 21.0 software. Findings show that the overall mean score of soft skills is high (mean=4.05, sp=.205). Value skills, ethics and professionalism (mean=4.13, sp=.193) showed the highest mean score. Next, it is followed by cognitive skills (mean=4.10, sp=.293), leadership skills, autonomy and responsibility (mean=4.06, sp=.306), interpersonal skills (mean=4.05, sp=.305, personal skills (mean=4.05, sp=.294), communication skills (mean=4.00, sp=.285) and digital skills (mean=3.98, sp=. 3668). In conclusion, novice teachers that were graduated from IPGKBL showed high level mastery of soft skills.

***Keywords**: soft skills; IPGKBL students; PISMP*

PENGENALAN

Misi Institut Pendidikan Guru Malaysia (IPGM) ialah melahirkan guru yang kompeten dan berjiwa pendidik melalui program pembangunan guru yang dinamik ke arah Pendidikan sekolah bertaraf dunia. Pendidikan abad ke-21 yang dinyatakan dalam Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025 pada ketika ini menunjukkan bahawa kemahiran pengajaran dan pengetahuan dalam bidang pendidikan sahaja tidak mencukupi, tetapi mereka juga perlu menguasai setiap komponen dalam kemahiran insaniah (Kamarul et al., 2017). Kemahiran insaniah amat penting kerana kemahiran ini akan memberikan nilai tambah kepada guru pelatih. Oleh itu, pelbagai platform disediakan di Institut Pendidikan Guru (IPG) bagi memastikan guru pelatih mendapat latihan termasuk kemahiran insaniah. Ini kerana, Institut Pendidikan Tinggi (IPT) adalah platform yang paling sesuai untuk membentuk kemahiran insaniah pelajar (Ballantine & Larres, 2007; Norsila Abdul Rahman, 2008; Marzuki et al., 2021).

Istilah kemahiran insaniah membawa maksud yang serupa dengan kemahiran dipindah milik, kemahiran generik, kemahiran kebolehgajian, kemahiran asas dan kemahiran perlakuan (Salleh et al., 2017). Secara lazimnya, istilah yang digunakan merujuk kepada kepelbagaian ilmu, kemahiran dan nilai kehidupan yang perlu ada pada seseorang bagi meningkatkan kebolehpasarannya di dalam dunia pekerjaan (Abbas et al., 2013; Md Rashidi et al., 2018). Kebanyakan istilah memberi tumpuan kepada gambaran personal, sikap, tabiat dan juga tingkah laku (Hazilah Mohd Amin et al., 2013). Boleh disimpulkan, kemahiran insaniah merupakan satu set kemahiran yang bertujuan untuk melengkapkan pembentukan insan yang seimbang dari segi intelek, rohani, emosi dan fizikal, berasaskan pegangan teguh kepada kepercayaan kepada Tuhan.

Di Malaysia, kemahiran insaniah mula diberi penekanan melalui Pelan Induk Pendidikan 2006-2010 (2006). Satu piawai (standard) bagi semua kurikulum dalam pendidikan tinggi di Malaysia harus mempunyai reka bentuk yang menerapkan kemahiran insaniah yang meliputi, (i) kemahiran berfikir, bertindak, mengadaptasi, menyelesai masalah dan membuat keputusan, (ii) kemahiran interpersonal dan

berkomunikasi, (iii) kemahiran teknologi maklumat, multimedia dan kemahiran pengurusan maklumat, (iv) kemahiran kepimpinan, dan (v) kemahiran keusahawanan telah ditetapkan. Di peringkat IPGM, Buku Panduan Kemahiran Insaniah IPGM telah dikeluarkan pada tahun 2019 dan dikemaskini pada Jun 2022 (Pusat Kecemerlangan Akademik, 2022). Kemahiran generik yang terdiri daripada sembilan jenis kemahiran iaitu (i) kemahiran kognitif; (ii) kemahiran interpersonal; (iii) kemahiran komunikasi; (iv) kemahiran digital; (v) kemahiran numerasi; (vi) kemahiran kepimpinan, autonomi dan tanggungjawab; (vii) kemahiran personal; (viii) kemahiran keusahawanan; (ix) kemahiran etika, nilai dan profesionalisme (Pusat Kecemerlangan Akademik, 2022). Selaras dengan perkembangan global, bakal guru perlu disediakan dengan pelbagai kemahiran insaniah.

PERNYATAAN MASALAH

Masalah pengangguran dalam kalangan pelajar IPT menjadi isu negara dan perbincangan hangat di dalam media massa sejak akhir tahun 1990-an. Menurut statistik pengangguran graduan siswazah Jabatan Perangkaan Malaysia (DOSM) 2019, graduan siswazah Malaysia meningkat kepada 5.29 juta atau 6.9 peratus lebih tinggi pada 2019 berbanding 4.94 juta pada tahun 2018 (Jabatan Perangkaan Malaysia, 2019). Pada tahun 2020, kadar pengangguran siswazah pada 2020 naik sebanyak 0.5 mata peratus kepada 4.4 peratus berbanding 3.9 peratus pada tahun sebelumnya (Berita Harian, 2021). Penekanan kepada keupayaan graduan memiliki kemahiran insaniah amat penting kerana, pada hari ini tingkat kebolehpasaran seorang graduan bukan hanya bergantung kepada pencapaian akademik tetapi juga bergantung kepada kemahiran insaniah dan kemahiran praktikal yang dimiliki (Mariana, 2008; Yaasin, 2008; Mohamad Sattar Rasul, et al., 2009; Nik Azma, 2011; Hazilah Mohd Amin et.al., 2013; Ramdan Ali, 2023).

Dapatan kajian Sharifah Hana Abd Rahman et al. (2015) menunjukkan tahap kepuasan majikan secara umumnya bergantung kepada penguasaan ilmu, sahsiah, pembawaan diri yang baik, kemahiran generik yang dimiliki pekerja. Kajian oleh Mahazan et al. (2015) juga mendapati faktor kepimpinan, etika, dan agama memberi kesan kepada peluang pekerjaan manakala kajian Sahlawati Abu Bakar dan Zaidul Amin Suffian Ahmad (2015) menunjukkan industri sangat menitikberatkan nilai agama serta turut menjadi faktor pemilihan pekerja yang berintegriti dan profesional. Kajian oleh Ahmad (2007) mendapati masalah pengangguran graduan universiti masa kini adalah disebabkan kekurangan kemahiran insaniah kerana komponen tersebut kurang diberi perhatian berbanding dengan kemahiran teknikal. Maka, menjadi tanggungjawab sektor pendidikan untuk mengambil tindakan proaktif dalam isu ini. Saemah et al. (2011) menyatakan para majikan sering mencadangkan kepentingan pelajar dalam sistem persekolahan dilengkapi dengan kemahiran insaniah seperti membuat keputusan, berfikir secara kreatif dan kritis. Kadar kebolehpasaran graduan pada tahun 2021 ialah 85.5% berbanding 84.4% pada tahun 2020 (Hawati Abdul Hamid, 2022). Namun, kadar kebolehpasaran yang direkodkan bagi graduan TVET adalah lebih tinggi berbanding bukan TVET. Kadar kebolehpasaran ini menggambarkan keberhasilan usaha membangunkan modal insan namun dapatan menunjukkan antara 2018 hingga 2021, sekitar 40% daripada

graduan bekerja dalam pekerjaan yang tidak memerlukan kelayakan tertiari (Hawati Abdul Hamid, 2022).

Kajian oleh Hiew dan Cheah (2022) mendapati guru kini terpaksa berdepan dengan pelbagai cabaran. Justeru, kemahiran insaniah adalah satu aspek kompetensi yang perlu dimiliki oleh semua guru. Walaupun punca utama pengangguran dalam kalangan graduan siswazah perguruan lepasan universiti tempatan berlaku adalah disebabkan jurusan yang diambil oleh mereka tidak selaras dengan unjuran keperluan guru (Omar Ahmad, 2023); namun guru tetap perlu melengkapkan diri dengan kemahiran insaniah. Ini kerana kemahiran insaniah dapat digunakan dalam pengendalian kelas serta menerapkannya dalam kalangan murid.

Terdapat kajian mendapati kebanyakan guru baharu yang berada dalam transisi dari latihan di institusi dan ditempatkan di sekolah mengalami kejutan kerana mendapati latihan berbeza daripada situasi sebenar (Amin & Othman, 2019). Kajian oleh Tang dan Tan (2015) yang melibatkan guru permulaan dari lima universiti tempatan mendapati pihak pentadbir berpendapat guru permulaan kurang penghayatan dalam aspek etika dan moral profesionalisme dan kurang komited terhadap kerja mereka. Mereka juga dikatakan sering menolak tanggungjawab yang ditugaskan. Kajian yang berterusan sejak tahun 2017 daripada pelbagai institusi dan penyelidik menunjukkan bahawa tahap kepuasan pelanggan daripada perspektif pentadbir sekolah masih boleh dibincangkan dari aspek pengajaran dan pembelajaran (PdP), penyelesaian masalah, komunikasi, pengurusan maklumat dan pembelajaran sepanjang hayat (Mohamad Zuber et al., 2019; Mazni Muhammad et al., 2019). Dapatan laporan maklum balas pelanggan terhadap guru baharu lulusan PISMP IPG Ambilan Jun 2015 menunjukkan kualiti guru dari aspek penyelesaian masalah, komunikasi, pengurusan maklumat dan pembelajaran sepanjang hayat adalah tinggi (IPGM, 2022). Namun masih perlu dorongan dan sokongan dari aspek kesediaan dan keinginan diri menimba ilmu dan meningkatkan profesionalisme diri. Beberapa elemen dalam kepuasan pelanggan adalah berkaitan dengan elemen di dalam kemahiran insaniah. Oleh itu, kajian ini dijalankan bagi meninjau dengan lebih terperinci tahap penguasaan kemahiran insaniah dalam kalangan guru-guru baharu lepasan IPG KBL.

OBJEKTIF KAJIAN

Objektif kajian ini ialah:

a. Mengenal pasti tahap kemahiran insaniah dalam kalangan pelajar keluaran IPG KBL bagi program PISMP Jun 2015 dan PISMP Jun 2016.
b. Mengenal pasti perbezaan tahap kemahiran insaniah dalam kalangan pelajar keluaran IPGKBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

HIPOTESIS

Hipotesis alternatif bagi objektif 2 kajian ini ialah:

H_a1: Terdapat perbezaan skor min tahap penguasaan kemahiran insaniah secara keseluruhan dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

H_a2: Terdapat perbezaan skor min tahap penguasaan kemahiran kognitif dalam kalangan guru-guru baharu lepasan IPG Kampus Batu Lintang bagi PISMP Jun 2015 dengan PISMP Jun 2016.

H_a3: Terdapat perbezaan skor min tahap penguasaan kemahiran interpersonal dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

H_a4: Terdapat perbezaan skor min tahap penguasaan kemahiran komunikasi dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

H_a5: Terdapat perbezaan skor min tahap penguasaan kemahiran digital dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

H_a6: Terdapat perbezaan skor min tahap penguasaan kemahiran kepimpinan, autonomi dan tanggungjawab dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

H_a7: Terdapat perbezaan skor min tahap penguasaan kemahiran personal dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

H_a8: Terdapat perbezaan skor min tahap penguasaan kemahiran nilai, etika dan profesionalisme dalam kalangan pelajar keluaran IPG KBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

METODOLOGI KAJIAN

Reka bentuk Kajian dan Sampel Kajian

Kajian ini merupakan kajian kuantitatif menggunakan reka bentuk kajian tinjauan. Kajian tinjauan merupakan kajian yang menghurai isu-isu dan masalah dalam pelbagai perspektif terutama melibatkan sikap, pandangan, kepercayaan, perasaan, tingkah laku dan persepsi serta kajian yang mengkaji sesuatu fenomena (IPGM, 2018). Soal selidik dalam bentuk *Google Form* diedarkan kepada guru-guru baharu lepasan IPGKBL yang telah mengajar di sekolah selama satu hingga dua tahun di sekolah. Reka bentuk tinjauan bersesuaian dengan kaedah kuantitatif kerana prosedur tinjauan melibatkan pengumpulan data bernombor untuk dianalisis secara statistik bagi menerangkan fenomena (Muijs, 2011).

Kajian ini menggunakan persampelan rawak berkelompok melibatkan dua kelompok kumpulan bekas pelajar PISMP yang telah bergraduasi dari IPGKBL. Sampel kajian terdiri pelajar keluaran IPG Kampus Batu Lintang daripada program PISMP Ambilan Jun 2015 dan 2016 seramai 205 yang ditempatkan di 87 buah

sekolah di seluruh negara. Namun, hanya 118 orang resonden menjawab soal selidik tersebut. Jadual 1 menunjukkan bilangan sekolah dan bilangan guru baharu yang terlibat di dalam kajian ini termasuk maklumat negeri dan pejabatan pendidikan daerah.

Jadual 1
Bilangan responden

Negeri	PPD	Bilangan Sekolah Terlibat	Bilangan responden
Perak	Manjung	2	2
	Larut/Matang/Selama	1	1
	Hulu Perak	1	1
	Kinta Selatan	1	1
Selangor	Kuala Selangor	2	2
	Klang	1	1
	Petaling Perdana	9	10
	Petaling Utama	1	1
	Hulu Langat	1	1
	Gombak	1	1
Pahang	Cameron Highlands	1	1
	Rompin	1	1
	Lipis	1	1
	Bentong	1	1
Johor	Johor Bahru	1	1
	Pasir Gudang	1	1
	Kulai	1	1
	Batu Pahat	1	1
	Segamat	1	1
Kedah	Langkawi	5	6
Melaka	Alor Gajah	2	2
	Jasin	1	1
	Melaka Tengah	2	2
WP Putrajaya	Putrajaya	1	1
Negeri Sembilan	Rembau	1	1
	Seremban	1	1
Kuala Lumpur	Sentul	2	2
	PPW Bangsar Pudu	2	3
	Keramat	1	1
Sarawak	Lundu	3	3
	Padawan	1	1
	Betong	2	2
	Baram	6	8
	Saratok	2	2
	Subis	4	4
	Limbang	1	1
	Bintulu	2	2
	Lubok Antu	4	5
	Dalat	1	1
	Miri	2	2
	Lawas	2	2
	Julau	2	2
	Daro	1	1
	Belaga	2	2
	Song	2	2
	Tatau/Sebauh	5	6
	Mukah	1	1
	Sri Aman	2	2
	Sibu	1	1
	Kapit	1	1
	Maradong	1	1

Sabah	Tenom		1	2
	Sandakan		1	1
	Kinabatangan		2	3
	Labuk & Sugut		3	3
	Lahad Datu		1	1
	Semporna		1	1
	Sepitang		1	1
	Kuala Penyu		1	1
	Tawau		1	1
		Jumlah	87	205

Instrumen Kajian

Instrumen kajian adalah berdasarkan konstruk kemahiran insaniah dalam Buku Panduan Kemahiran Insaniah IPGM （KP，2019； KPM, 2022). Terdapat sembilan konstruk jenis kemahiran insaniah, iaitu (i) kemahiran kognitif; (ii) kemahiran interpersonal; (iii) kemahiran komunikasi; (iv) kemahiran digital; (v) kemahiran numerasi; (vi) kemahiran kepimpinan, autonomi dan tanggungjawab; (vii) kemahiran personal; (viii) kemahiran keusahawanan; (ix) kemahiran etika, nilai dan profesionalisme. Walau bagaimanapun, bagi tujuan kajian ini, hanya tujuh kemahiran insaniah yang sesuai dengan kajian, iaitu (i) kemahiran kognitif, (ii) kemahiran interpersonal, (iii) kemahiran komunikasi, (iv) kemahiran digital, (v) kemahiran kepimpinan, autonomi dan tanggungjawab, (vii) kemahiran personal dan (vii) kemahiran etika, nilai dan profesionalisme.

Soal selidik terdiri daripada dua bahagian, iaitu Bahagian A ialah latar belakang dan Bahagian B adalah berkaitan konstruk kemahiran insaniah. Soalan terbuka juga ditanya dalam soal selidik tersebut. Soal selidik diedarkan kepada responden dalam bentuk *Google Form*. Instrumen dijawab oleh guru baharu dan pentadbir sekolah secara berasingan. Ujian rintis yang dijalankan menunjukkan nilai kebolehpercayaan *Alpha Cronbach* (α) untuk kajian ini ialah 0.802. Ini bermaksud menepati nilai minimum 0.60 yang sering digunakan untuk mengukur indeks kebolehpercayaan sesuatu instrumen (Pallant, 2013).

DAPATAN KAJIAN

Tahap kemahiran insaniah pelajar keluaran IPGKBL bagi PISMP Jun 2015 dan PISMP Jun 2016

Data-data yang diperoleh dianalisis dengan berpandukan SPSS versi *21.0.* Interpretasi skor min tahap kemahiran insaniah ditunjukkan dalam Jadual 2

Jadual 2
Penentuan tahap berdasarkan skor min

Skor Min	Tahap
1.00 – 2.33	rendah
2.34 – 3.67	sederhana
3.68 – 5.00	tinggi

Sumber: Pallant (2015)

Dapatan kajian seperti di dalam Jadual 3 menunjukkan skor min keseluruhan tahap kemahiran insaniah dalam kalangan pelajar keluaran IPGKBL adalah tinggi (min=4.05, sp=.205). Kemahiran insaniah yang paling tinggi ialah kemahiran nilai, etika dan profesionalisme (min=4.13, sp=.193), diikuti oleh kemahiran insaniah kognitif, kemahiran kepimpinan, autonomi dan tanggungjawab, kemahiran komunikasi, kemahiran personal, kemahiran interpersonal dan kemahiran digital.

Jadual 3
Skor min tahap kemahiran insaniah

Kemahiran Insaniah	Skor min	Sisihan Piawai	Tahap kemahiran insaniah
Kemahiran Nilai, Etika dan Profesionalisme	4.13	.193	tinggi
Kemahiran Kognitif	4.10	.293	tinggi
Kemahiran Kepimpinan autonomi dan tanggungjawab	4.06	.306	tinggi
Kemahiran Interpersonal	4.05	. 305	tinggi
Kemahiran Personal	4.05	.294	tinggi
Kemahiran Komunikasi	4.00	.285	tinggi
Kemahiran Digital	3.98	.368	tinggi
Keseluruhan	4.05	.205	tinggi

Jadual 4 menunjukkan dapatan secara terperinci mengenai kemahiran insaniah nilai, etika dan profesonalisme. Item-item bagi kemahiran insaniah nilai, etika dan profesionalisme mempunyai skor min tahap kemahiran insaniah paling tinggi ialah item 7f iaitu menunjukkan tatalaku seperti berpegang kepada peraturan, undang-undang, kod amalan baik atau tatalaku profesional (min=4.23, sp=.422). Kemudian, diikuti dengan item 7g iaitu berpegang kepada sistem peraturan moral seperti beretika dalam menggunakan harta intelek dan bahan rujukan atau prinsip-prinsip perilaku yang menjadi amalan di tempat kerja (min=4.19, sp=.398).

Item 7h iaitu bertindak secara beretika atau profesional dalam persekitaran dan amalan profesional yang pelbagai (min=4.15, sp= .421). Item 7e iaitu mempamerkan kepentingan kualiti diri dalam mencipta perubahan bermakna dalam kehidupan, pekerjaan dan dunia merupakan item yang mempunyai skor min terendah di antara item namun masih pada tahap yang tinggi (min=4.00, sp= .314). Secara keseluruhan, skor min bagi 9 item yang menguji kemahiran nilai, etika dan profesionalisme adalah berada dalam julat 4.00-4.25.

Jadual 4
Skor min bagi item kemahiran nilai, etika dan profesionalisme

Item	Sub Atribut	Skor min	sp	Tahap
7a	Mempunyai kesedaran dan menghormati perbezaan dan isu-isu etika, sosial dan budaya dalam melaksanakan kemahiran dan tanggungjawab profesional.	4.09	.292	tinggi
7b	Mempunyai sikap tidak bergantung kepada bantuan orang lain untuk melakukan sesuatu tugasan.	4.14	.412	tinggi
7c	Mempunyai sikap suka membantu orang lain dan mengambil berat hal ehwal komuniti untuk kesejahteraan bersama	4.14	.353	tinggi
7d	Mempunyai sikap positif yang merangka dan mengawal tindakan dilakukan lebih awal daripada jangkaan yang akan berlakunya sesuatu perkara atau kejadian	4.11	.314	tinggi
7e	Mempamerkan kepentingan kualiti diri dalam mencipta perubahan bermakna dalam kehidupan, pekerjaan dan dunia.	4.00	.320	tinggi
7f	Menunjukkan tatalaku seperti berpegang kepada peraturan, undang-undang dan kod amalan baik atau tatalaku profesional	4.23	.422	tinggi
7g	Berpegang kepada sstem peraturan moral seperti beretika dalam menggunakan harta intelek dan bahan rujukan atau prinsip-prinsip perilaku yang menjadi amalan di tempat kerja atau persekitaran.	4.19	.398	tinggi
7h	Bertindak secara beretika / berprofesional dalam persekitaran dan amalan profesional yang pelbagai	4.15	.419	tinggi
7i	Mempunyai pandangan yang bernas berkaitan isu dan kepentingan alam sekitar dan menerapkan perspektif ini ke dalam hasil kerja.	4.08	.280	tinggi
	min keseluruhan	4.13	.193	tinggi

Jadual 5 pula menunjukkan skor min bagi tahap kemahiran insaniah kognitif adalah tinggi (min=4.10, sp=.423). Item 1c iaitu berupaya membuat keputusan berasaskan bukti kukuh (min=4.21, sp=.431) merupakan item yang mempunyai skor min tertinggi. Kemudian, diikuti dengan item 1a iaitu boleh mengaplikasi pengetahuan atau menggunakan kemahiran berfikir dalam pelbagai konteks (min=4.14, sp=.344), item 1b iaitu boleh membuat perkaitan dan menganalisis pola, trend atau kesamaan data berasaskan maklumat (min=4.14, sp=.368).

Jadual 5
Skor min bagi item kemahiran kognitif

Item	Sub Atribut	Skor min	sp	Tahap
1a	Boleh mengaplikasi pengetahuan atau kemahiran menggunakan pelbagai kemahiran berfikir dalam pelbagai konteks	4.14	.344	tinggi
1b	Boleh membuat perkaitan dan menganalisis pola, trend atau kesamaan data berasaskan maklumat.	4.14	.368	tinggi
1c	Berupaya membuat keputusan berasaskan bukti yang kukuh.	4.21	.431	tinggi
1d	Berupaya membina pengetahuan baharu yang bermakna dan menerapkannya di dunia sebenar	3.97	.505	tinggi
1e	Mahir mengenal pasti dan menganalisis masalah dalam situasi kompleks/kabur	4.19	.452	tinggi
1f	Mahir melaksanakan tindakan penyelesaian masalah.	3.97	.443	tinggi
1g	Mahir membuat analisis reflektif dan menilai semula tindakan penyelesaian masalah untuk penambahbaikan.	4.08	.417	tinggi
	min keseluruhan	4.10	.293	tinggi

Ini diikuti oleh Item 1e iaitu mahir mengenal pasti dan menganalisis masalah dalam situasi kompleks (min=4.19, sp=.452). Seterusnya item 1g iaitu mahir membuat analisis reflektif dan menilai semula tindakan penyelesaian masalah untuk penambahbaikan (min=4.08, sp=.417). Dua item yang masih di tahap tinggi tetapi di bawah skor min 4.00 ialah item 1d dan 1f. Item 1f ialah mahir melaksanakan tindakan penyelesaian masalah (mn=3.99, sp=.443). Item yang menunjukkan skor min yang paling rendah namun masih berada di tahap skor min tinggi ialah item 1d iaitu berupaya membina pengetahuan baharu yang bermakna dan menerapkannya di dalam dunia sebenar. Keseluruhannya, responden menunjukkan kemahiran insaniah kognitif pada tahap yang tinggi.

Dapatan kajian seperti di dalam Jadual 6 pula menunjukkan skor min bagi kemahiran kepimpinan, autonomi dan tanggungjawab (KAT) pada tahap tinggi (min=4.06, sp=.506). Berdasarkan Jadual 6, item bagi kemahiran KAT yang mempunyai skor tertinggi ialah item 5c iaitu boleh mengagihkan tugas dan kuasa kepada ahli pasukan dengan menggalakkan penglibatan semua ahli (min=4.31, sp=.501).

Jadual 6
Skor min bagi item kemahiran insaniah kepimpinan, autonomi dan tanggungjawab

Item	Sub Atribut	Skor min	sp	Tahap
5a	Berkeupayaan memimpin tugasan dalam pasukan	3.84	.569	tinggi
5b	Boleh mengagihkan tugas dan kuasa kepada ahli pasukan dengan mengalakkan penglibatan semua ahli.	4.08	.648	tinggi
5c	Berkebolehan menunjukkan kolaboratif antara pemimpin dan ahli pasukan	4.31	.501	tinggi
5d	Boleh menunjukkan autonomi dalam membuat pilihan dan keputusan berasaskan pertimbangan jiwa pendidik.	4.01	.577	tinggi
5e	Menunjukkan tanggungjawab melaksanakan amanah membangunkan potensi diri dan pasukan dalam bidang pendidikan (pengajaran dan pembelajaran).	4.10	.513	tinggi
5f	Berkeupayaan mengembangkan potensi diri sendiri dan ahli pasukan untuk memimpin pencapaian matlamat pendidikan (pengajaran dan pembelajaran)	4.06	.419	tinggi
5g	Berkebolehan menunjukkan kolaboratif dan proses interaksi sosial antara pemimpin, ahli pasukan dan komuniti luar.	4.05	.316	tinggi
	min keseluruhan	4.06	.309	tinggi

Item KAT yang mempunyai skor min terendah tetapi masih pada tahap tinggi ialah 5a iaitu berkeupayaan mempimpin tugasan di dalam kumpulan (min=3.84, sp.=.569). Skor min bagi item-item sperti 5b, 5d, 5e, 5f dan 5g menunjukkan KAT adalah tinggi. Dapatan ini menunjukkan bahawa responden berpandangan bahawa mereka masih perlu bimbingan dalam memimpin tugasan di dalam kumpulan. Dapatan kualitatif menunjukkan responden berpendapat, untuk memimpin termasuk guru-guru senior di dalam kumpulan yang dibimbing, mereka masih memerlukan pelbagai pengetahuan dan kemahiran. Walau bagaimanapun, skor min keseluruhan bagi kemahiran insaniah kepimpinan autonomi dan tanggungjawab masih pada tahap yang tinggi.

Jadual 7 menunjukkan skor min bagi kemahiran komunikasi. Skor min keseluruhan bagi tahap kemahiran komunikasi (min= 4.05, sp=.458) juga pada tahap tinggi. Dapatan menunjukkan bahawa skor min tertinggi bagi item kemahiran komunikasi ialah item 2f iaitu boleh dipercayai untuk menghasilkan sesuatu perkara yang terbaik apabila diberi amanah dan berjaya memberi impak yang positif (min=4.17, sp=.420). Dapatan ini menunjukkan responden telah melaksanakan setiap amanah yang diberikan oleh pihak sekolah.

Skor min kedua tertinggi ialah item 2c iaitu berkebolehan berkolaboratif, memberi tunjuk ajar, bimbingan dan bantuan kepada orang lain (min=4.14, sp=.376). Item 2b menunjukkan skor min terendah tetapi masih pada tahap yang tinggi

(min=3.86, sp=.612) iaitu boleh memberi ketenangan dan dapat menyesuaikan diri terhadap kesusahan orang lain/mengikut situasi audiens. Selain itu, dapatan ini menunjukkan bahawa responden memberikan skor min yang tinggi kepada kemahiran komunikasi seperti boleh berkomunikasi, berkolaboratif, menggunakan pelbagai mod komunikasi, dan mempunyai kemahiran mendengar secara aktif.

Item yang menunjukkan skor min terendah tetapi masih pada tahap yang tinggi ialah item 2b iaitu boleh memberi ketenangan dan dapat menyesuaikan diri terhadap kesusahan orang lain/mengikut situasi audiens (min=3.86, sp=.612). Selain itu, dapatan ini menunjukkan bahawa responden memberikan skor min yang tinggi kepada kemahiran komunikasi seperti boleh berkomunikasi, berkolaboratif, menggunakan pelbagai mod komunikasi, dan mempunyai kemahiran mendengar secara aktif.

Jadual 7
Skor min item kemahiran komunikasi

Item	Sub Atribut	Skor min	sp	Tahap
2a	Mempunyai kemahiran mendengar aktif dan berjaya melahirkan perasaan simpati melalui kata-kata, perbuatan serta tingkah laku yang sesuai mengikut situasi	4.09	.392	tinggi
2b	Boleh memberi ketenangan dan menyesuaikan diri terhadap kesusahan orang lain/ mengikut situasi audiens	3.86	.612	tinggi
2c	Berketrampilan dalam berkomunikasi, memberi penghargaan dan menjadi suri teladan untuk pelbagai situasi	3.99	.660	tinggi
2d	Berkeupayaan dalam berkolaboratif, memberi tunjuk ajar, bimbingan dan bantuan kepada orang lain dengan menggunakan kemahiran interpersonal yang terpuji	4.14	.376	tinggi
2e	Berkebolehan menggunakan pelbagai mod komunikasi secara bijak untuk menyampaikan mesej secara koheren.	4.03	.290	tinggi
2f	Boleh dipercayai untuk menghasilkan sesuatu perkara yang terbaik apabila diberi amanah dan berjaya memberi impak yang positif	4.17	.420	tinggi
	min keseluruhan	4.05	.304	tinggi

Jadual 8 pula menunjukkan skor min item bagi kemahiran kemahiran personal (min=4.05, sp=.422). Skor min bagi item kemahiran personal yang mempunyai skor min tertinggi ialah item 6d (min=4.19, sp=.439). Item ialah berusaha untuk menjadi jujur dengan prinsip-prinsip moral yang kuat. Item yang mempunyai skor min terendah namun masih pada tahap tinggi ialah item 6b iaitu boleh merancang dan melaksanakan kawalan masa yang digunakan untuk sesuatu aktiviti (min=3.86, sp=.412).

Jadual 8
Skor min item kemahiran personal

Item	Sub Atribut	Skor min	sp	Tahap
6a	Sentiasa berusaha meningkatkan ilmu pengetahuan dan kemahiran untuk membangunkan kerjaya hingga ke peringkat global	3.97	.554	tinggi
6b	Boleh merancang dan melaksanakan kawalan masa yang digunakan untuk sesuatu aktiviti, terutamanya untuk meningkatkan keberkesanan, kecekapan atau produktiviti.	3.86	.412	tinggi
6c	Bermotivasi lain untuk menyiapkan setiap tugasan dan aktiviti	4.16	.433	tinggi
6d	Berusaha untuk menjadi jujur dengan prinsip-prinsip moral yang kuat seperti belas kasihan, kewibawaan, murah hati, jujur, baik hati, kesetiaan, kematangan, mempunyai matlamat dan kepercayaan bagi memiliki integriti peribadi dan etika profesional.	4.19	.439	tinggi
6e	Berkebolehan bertindak secara pantas dalam membuat keputusan dan menyelesaikan masalah dalam konteks yang baharu	4.06	.271	tinggi
	min keseluruhan	4.05	.294	tinggi

Seterusnya ialah kemahiran interpersonal yang juga mempunyai skor min pada tahap yang tinggi (min=4.00, sp=.449) seperti yang dinyatakan di dalam Jadual 9. Skor min bagi item 3h mempunyai skor min yang paling tinggi iaitu berkebolehan untuk berkomunikasi merentasi budaya, disiplin dan bekerja dalam pasukan bagi membentuk hubungan yang positif (min=4.25, sp=.492). Ini diikuti dengan item 3f iaitu berkebolehan menggunakan bahasa badan (min=4.14, sp=.494). Seterusnya item 3g iaitu berkebolehan menggunakan pelbagai mod komunikasi dengan bijak (min=4.10,sp=.355).

Skor min dapatan di dalam Jadual 9 juga menunjukkan bahawa skor min yang terendah ialah bagi item 3e iaitu mengamalkan, memberi dan menerima maklum balas untuk mereka bentuk semula pengalaman pembelajaran (min=3.76, sp=.580). Walau bagaimanapun item 3e masih mempunyai skor min pada tahap yang tinggi. Ini menunjukkan bahawa responden mempunyai skor min yang tinggi bagi kemahiran interpersonal. Secara tidak langsung, menunjukkan bahawa pada persepsi responden, mereka mempunyai kemahiran interpersonal seperti menyampaikan idea dengan jelas, menyampaikan idea berasaskan pembelajaran bermakna melalui pembentangan meggunakan teknologi.

Jadual 9
Skor min item kemahiran interpersonal

Item	Sub Atribut	Skor min	sp	Tahap
3a	Berkebolehan menyampaikan idea yang jelas, koheren,yakin dan meyakinkan	4.03	.368	tinggi
3b	Berkebolehan menyampaikan idea berasaskan pembelajaran bermakna melalui pembentangan menggunakan teknologi	3.86	.432	tinggi
3c	Berkebolehan menggunakan bahasa lisan yang sesuai untuk berunding, berbincang dan mencapai persetujuan berasaskan pertimbangan jiwa pendidik	4.04	.304	tinggi
3d	Mengamalkan kemahiran mendengar secara berkesan.	3.84	.569	tinggi
3e	Mengamalkan, memberi dan menerima maklum balas untuk mereka bentuk semula pengalaman pembelajaran (redesign learning experience)	3.76	.580	tinggi
3f	Boleh menggunakan bahasa badan (body language) yang melibatkan postur badan, kontak mata, gerakan fizikal, dan ekspresi muka yang sesuai ke arah keberkesanan pengajaran dan pembelajaran	4.14	.494	tinggi
3g	berkebolehan menggunakan pelbagai mod komunikasi secara bijak untuk menyampaikan mesej secara koheren.	4.10	.355	tinggi
3h	Berkebolehan untuk berkomunikasi merentasi budaya, disiplin dan bekerja dalam pasukan bagi membentuk hubungan yang positif.	4.25	.492	tinggi
	min keseluruhan	4.00	.287	tinggi

Jadual 10 pula menunjukkan skor min bagi kemahiran digital pada tahap tinggi namun merupakan skor min bagi kemahiran insaniah yang paling rendah (min=3.98, min=.489). Ini bermakna, skor min kemahiran digital adalah yang paling rendah berbanding skor min 6 elemen kemahiran insaniah yang lain. Walau bagaimanapun, skor min masih menunjukkan pada tahap yang tinggi. Item yang mendapat skor min tertinggi ialah item 4b iaitu mengumpul, menyisih, menyimpan dan memproses maklumat dari pelbagai sumber digial (min=4.04, sp=.356). Item yang mempunyai skor min terendah ialah item 3e iaitu mengamalkan, memberi dan menerima maklum balas untuk mereka bentuk semula pengalaman pembelajaran (min=3.76, sp=.580). Dapatan ini menunjukkan tahap kemahiran digital masih pada tahap tinggi.

Jadual 10
Skor min item kemahiran digital

Item	Sub Atribut	Skor min	sp	Tahap
4a	Mengaplikasi pelbagai kemahiran digital, sumber media dan teknologi dengan mengiktiraf hak digital, bertanggungjawab, beretika dalam pelbagai konteks pembelajaran, pekerjaan dan kehidupan.	4.01	.592	tinggi
4b	Mengumpul, menyisih, menyimpan dan memproses maklumat dari pelbagai sumber digital mengikut konteks untuk membuat refleksi dan cadangan penambahbaikan bagi penyelesaian isu	4.04	.356	tinggi
4c	Berkebolehan untuk berkolaboratif dalam pengupayaan jalinan dan jaringan, perkongsian ilmu pengetahuan dan kemahiran yang dikuasai pada peringkat tempatan atau global bagi tujuan memperluaskan perspektif atau memperkayakan pengalaman pembelajaran bermakna.	3.96	.478	tinggi
4d	Fasih digital, terlatih dan berkemahiran dalam membimbing untuk meningkatkan kemahiran, pengetahuan dan etika digital	3.90	.529	tinggi
	min skor keseluruhan	3.98	.368	tinggi

Secara keseluruhannya, skor min kemahiran insaniah adalah pada tahap yang tinggi mengikut responden kajian yang terdiri daripada guru baharu lepasan IPG Kampus Batu Lintang Ambilan Jun 2015 dan Jun 2016. Responden telah memberikan skor min pada tahap tinggi bagi kesemua kemahiran insaniah yang dikaji.

Perbezaan tahap kemahiran insaniah dalam kalangan pelajar keluaran IPGKBL di antara pelajar PISMP Jun 2015 dan PISMP Jun 2016.

Perbezaan di antara dua kumpulan responden iaitu guru-guru baharu lepasan IPGKBL bagi PISMP Jun 2015 dan Jun 2016 dianalisis menggunakan statistik non parametrik. Ini kerana, keputusan ujian normaliti menunjukkan data tidak bertaburan normal. Oleh itu, data di analisis menggunakan ujian t sampel tidak bersandar menggunakan *Mann-Whitney U test.*

Ujian t sampel tidak bersandar *(independent sample t test*) menggunakan *Mann-Whitney U test* menunjukkan tidak terdapat perbezaan signifikan skor min kemahiran insaniah secara keseluruhan di antara guru-guru baharu keluaran IPGKBL bagi PISMP Jun 2015 (Median=4, n=75) dan PISMP Jun 2016 (Median=4, n=43), U=1324, z=-1.678, p=.093, r=.15). Oleh itu, hipotesis ditolak. Jadual 11

menunjukkan dapatan ujian t sampel tidak bersandar menggunakan *Mann Whitney U test*.

Dapatan secara terperinci bagi setiap jenis kemahiran insaniah pula menunjukkan tidak terdapat perbezaan skor min bagi kemahiran kognitif di antara guru-guru baharu keluaran IPGKBL bagi PISMP Jun 2015 (Median=4, n=75) dan PISMP Jun 2016 (Median=4, n=43), U= 1554, z = -.373, p=.709, r=.03). Oleh itu, hipotesis kajian ditolak. Begitu juga dapatan menunjukkan tidak terdapat perbezaan skor min bagi kemahiran komunikasi di antara guru-guru baharu PISMP Jun 2015 (Median=4, n=75) dan PISMP Jun 2016 (Median=4, n=43), U=1499,z=-2.672, p=.477, r=.06). Hipotesis bagi kajian ini juga diterima.

Jadual 11
Dapatan Ujian t Mann Whitney U Test antara pelajar PISMP Jun 2015 dan PISMP Jun 2016

Pelajar	Kemahiran insaniah	Median	U	z	*p*	*r*	Hipotesis
PISMP Jun 2015 (n=75)	kognitif	4	1554	-.37	.709	.03	ditolak
PISMP Jun 2016 (n=43)		4					
PISMP Jun 2015 (n=75)	komunikasi	4	1499	-.71	.477	.06	ditolak
PISMP Jun 2016 (n=43)		4					
PISMP Jun 2015 (n=75)	digital	4	1524	-.54	.591	.04	ditolak
PISMP Jun 2016 (n=43)		4					
PISMP Jun 2015 (n=75)	kepimpinan, autonomi dan tanggungjawab	4	1293	-1.89	.058	.17	ditolak
PISMP Jun 2016 (n=43)		4					
PISMP Jun 2015 (n=75)	personal	4	1382	-1.42	.156	.13	ditolak
PISMP Jun 2016 (n=43)		4					

PISMP Jun 2015 (n=75) PISMP Jun 2016 (n=43)	nilai, etika dan profesionalisme	4 4	1589	-.14	.888	.01	ditolak
PISMP Jun 2015 (n=75) PISMP Jun 2016 (n=43)	interpersonal	4 4	1171	-2.67	.008	.25	diterima
PISMP Jun 2015 (n=75) PISMP Jun 2016 (n=43)	kemahiran insaniah	4 4	1324	-1.68	.093	.15	ditolak

Dapatan kajian juga mendapati tidak terdapat perbezaan skor min kemahiran digital di antara guru-guru baharu PISMP Jun 2015 (Median=4, n=75) dan PISMP Jun 2016 (Median=4, n=43), U=1524, z=-.537 p=.591, r=.04). Hipotesis bagi kajian ini juga diterima.

Skor min bagi kemahiran kepimpinan, autonomi dan tanggungjawab juga menunjukkan tidak terdapat perbezaan skor min kemahiran personal di antara guru-guru baharu PISMP Jun 2015 (Median=4, n=75) dan PISMP Jun 2016 (Median=4, n=43), U=1293, z=-1.897, p=.058, r=.17). Hipotesis kajian ini juga diterima.

Seterusnya, tidak terdapat perbezaan skor min bagi kemahiran nilai, etika dan profesionalisme di antara guru-guru baharu PISMP Jun 2015 (Median=4, n=75) dan PISMP Jun 2016 (Median=4, n=43), U=1589, z=-.141, p=.888, r=.01). Hipotesis kajian diterima.

Walau bagaimanapun, terdapat perbezaan dalam skor min kemahiran interpersonal di antara guru-guru baharu keluaran IPGKBL bagi PISMP Jun 2015 (Median=4, n=75) dan Jun 2016 (Median=4, n=43), U=1171, z=-2.672, p=.008, r=.25). Hipotesis kajian ini diterima. Walau bagaimanapun, saiz kesan adalah kecil.

PERBINCANGAN DAN KESIMPULAN

Secara keseluruhan, dapatan kajian tahap penguasaan kemahiran insaniah dalam kalangan guru-guru baharu lepasan IPGKBL adalah tinggi. Dapatan menunjukkan skor min pada kategori tahap tinggi bagi semua konstruk kemahiran insaniah. Kemahiran Nilai, Etika dan Profesionalisme memperoleh skor min yang tertinggi. Kemahiran yang mempunyai skor terendah ialah kemahiran insaniah berkaitan kemahiran digital. Namun, skor tersebut masih pada kategori tinggi. Dapatan kualitatif menunjukkan bahawa guru-guru baharu berpendapat masih banyak yang

perlu diterokai dan dipertingkatkan terutama dari segi kemahiran digital. Ini kerana pelbagai kemahiran digital yang terkini perlu dikuasai terutama pada ketika pelaksanaan PdP secara dalam talian. Begitu juga pelbagai kemahiran digital yang selari dengan sistem yang disediakan oleh pihak Kementerian Pendidikan Malaysia juga perlu diperoleh. Dapatan kajian ini menunjukkan bahawa program yang dilaksanakan di IPG memang sesuai dan berjaya menyediakan guru-guru keluaran IPGM dengan kemahiran insaniah.

Penguasaan tahap kemahiran insaniah yang tinggi menunjukkan responden bersetuju bahawa mereka menguasai ketujuh-tujuh konstruk kemahiran insaniah. Walau bagaimanapun, terdapat kemahiran insaniah yang perlu dipertingkatkan mengikut perkembangan semasa dan kehendak sistem di sekolah terutama kemahiran digital. Dapatan temu bual menunjukkan responden bersetuju bahawa mereka perlu mempertingkatkan kemahiran pengendalian sistem secara dalam talian yang terdapat di KPM seperti sistem pengisian markah pentaksiran bilik darjah (PBD), dan lain-lain. Walaupun kemahiran digital yang diperoleh di IPGK membantu mereka dalam pengurusan PdP namun kemahiran tersebut perlu sentiasa dipertingkatkan mengikut perkembangan semasa.

Dapatan juga menunjukkan responden bersetuju bahawa mereka mempunyai kemahiran insaniah dari segi nilai, etika dan professionalisme yang tinggi. Latihan di IPG telah menyediakan kemahiran tersebut dan dapat diamalkan di sekolah. Dapatan ini menunjukkan bahawa pelajar keluaran IPG KBL mengamalkan tingkah laku dan mengikut peraturan di sekolah.

Dapatan juga menunjukkan tidak ada perbezaan signifikan kemahiran insaniah secara keseluruhan di antara pelajar bagi program PISMP Jun 2015 dan PISMP Jun 2016. Begitu juga tidak ada perbezaan signifikan bagi enam konstruk kemahiran insaniah kecuali kemahiran interpersonal. Dapatan ini juga menunjukkan bahawa pelajar PISMP Jun 2015 mempunyai skor min bagi kemahiran interpersonal yang lebih tinggi berbanding pelajar PISMP Jun 2016. Dapatan ini relevan memandangkan pelajar PISMP Jun 2015 sudah berada di sekolah lebih awal daripada PISMP Jun 2016. Kajian lebih lanjut perlu dilaksanakan bagi mengkaji keperluan sokongan dan bimbingan dalam kalangan pelajar keluaran IPG KBL dengan lebih teliti menggunakan kaedah kualitatif. Kajian boleh dilaksanakan bagi kes-kes terpencil seperti guru baharu yang ditempatkan di kawasan pedalaman.

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UTILIZING THE SCHOOL RESOURCE CENTRE FOR STUDENTS' INFORMATION LITERACY SKILLS DEVELOPMENT

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ABSTRACT

The School Resource Centre (SRC) is the physical resources centre that consists of collections of books, magazines, newspapers, atlas, e-books, interactive CDs and others in schools, universities and education institutes. The SRC also known as the school library is the knowledge warehouse specifically build for students to read, learn and enhance their learning. This study aims to review the literature on the importance of the school resource centre as the main information centre for the students to develop their information literacy skills, especially for schools with poor or no Internet connection. Besides, this study also aims to review the literature on the Big6 Information Literacy Model as the guidelines for students to seek information, locate the sources of information, and synthesize and evaluate the information. The study also reviews the literature on the role of library media teacher (*Guru Perpustakaan dan Media*, GPM) in students' information literacy skills development. Finally, this study proposed a conceptual model on the application of the Big6 Information Literacy Model and the usage of SRC as learning resources to enhance students' learning. The conceptual model depicts the flow of the students applying information literacy skills and using the sources of information gathered from SRC or the internet to complete their project. There are two situations, the school with a poor and no internet connection will fully depend on the resources found in SRC while the school with an internet connection will have the opportunity to access the Internet for information seeking. In the end, this study also proposed with few suggestions on how the GPM can guide the students utilizing the school resource centre for information seeking and guiding them with information literacy skills.

Keywords: S*chool Resource Centre (SRC), information literacy, Big6 Information Literacy Model, Library Media Teacher (GPM)*

ABSTRAK

Pusat Sumber Sekolah (PSS) adalah pusat sumber fizikal yang terdiri daripada koleksi buku, majalah, akhbar, atlas, e-buku, CD interaktif, dan lain-lain di sekolah, universiti, dan institut pendidikan. PSS juga dikenali sebagai perpustakaan sekolah yang merupakan gudang pengetahuan yang khusus dibina untuk murid membaca, belajar dan meningkatkan pembelajaran mereka. Kajian ini bertujuan untuk mengupas literatur berkenaan kepentingan PSS sebagai pusat maklumat utama bagi murid untuk membangunkan kemahiran literasi maklumat mereka, terutamanya bagi sekolah-sekolah yang mempunyai masalah pengaksesan internet yang lemah. Selain itu, kajian ini juga bertujuan untuk mengupas literatur berkenaan Model Literasi Maklumat Big6 sebagai panduan bagi murid untuk mencari maklumat, mencari sumber-sumber maklumat dan mensintesis serta menilai maklumat yang dicari. Kajian ini turut mengupas literatur berkenaan peranan Guru Perpustakaan dan Media (GPM) dalam membangunkan kemahiran literasi maklumat murid. Akhirnya, kajian ini mencadangkan sebuah model konseptual mengenai pengaplikasian Model Literasi Maklumat Bi g6 dan penggunaan PSS sebagai sumber pembelajaran bagi meningkatkan pembelajaran murid. Model konseptual yang dicadangkan dalam kajian ini menggambarkan cara murid menggunakan kemahiran literasi maklumat yang telah dipelajari dan menggunakan sumber-sumber maklumat yang didapati dari PSS atau internet untuk menyelesaikan tugasan projek mereka. Terdapat dua situasi dalam model yang dicadangkan, sekolah dengan masalah capaian internet yang lemah akan bergantung sepenuhnya dengan sumber-sumber yang terdapat di PSS, manakala sekolah dengan capaian internet yang stabil akan mempunyai peluang untuk mencari maklumat dari laman sesawang. Pada akhirnya, kajian ini juga turut mengemukakan beberapa cadangan berkenaan bagaimana GPM dapat membimbing murid dalam menggunakan maklumat dalam PSS untuk mencari maklumat menggunakan kemahiran literasi maklumat.

Kata Kunci: *Pusat Sumber Sekolah (PSS), literasi maklumat, Model Literasi Maklumat Big6, Guru Perpustakaan dan Media (GPM)*

INTRODUCTION

In the 21st century, education nowadays emphasizes and incorporates project-based learning, self-directed learning, peer learning, and knowledge construction in learning (Almazroui, 2022; Artama et al., 2023; Chistyakov et al., 2023; Nuraini et al., 2023). While developing knowledge, one cannot split from the learning resources. The learning resources can be in physical form such as the collection of books, journals, dictionaries, and others, or in virtual form which can be queried through the internet including e-books, articles, reports, and furthermore.

Few subjects in school need further supplementary resources of information to enhance the knowledge learned through the classroom lessons including Malay, English, Sciences, History, Geography, and others. Based on the project-based learning approach, the students will have to search for further information through different resources, strengthening their existing knowledge learned in the classroom (Krajcik & Czerniak, 2018). Hence, the internet and school library become the main information resources for students to search, read, and learn while completing their tasks or school project.

In Malaysia education institutes, SRC also known as the school library is an important physical resources centre consisting of collections of books, magazines, newspapers, atlas, e-books, interactive CDs, and others. The existence of SRC is mainly for students to read, search, refer, discuss, and learn further as supplementary for them to develop the existing knowledge learned in the classroom (Robiah & Noraddandy, 2008; Shamila et al., 2023). Mohamed Shuhidan et al. (2021) further added that the main objective for the existence of SRCs is to provide students with quality education for lifelong learning as well as self-learning. Malaysia Ministry of Education (MOE) has provided an amount of grant to school specifically to improve the collections of resources in SRC each year as this show how important is SRC.

GPM is the teacher officially appointed by State Education Department, is responsible to manage SRC in school. GPM is responsible to teach information literacy skills to students during the sit-in period (Bahagian Teknologi Pendidikan [BTP], 2017). A study by Kamal and Othman (2012) revealed that GPM, also a teacher who involves in full teaching and other tasks, might lack time to manage SRC. During the sit-in period, GPM can assign the students with a task to search for information. GPM is responsible in promoting reading and literacy among students. To cultivate the reading culture in school, GPM need to assist and guide the students discovering the books and materials that align with their interests and reading levels. Furthermore, GPM can provide personalized recommendations, organize book clubs, host author visits, and create engaging reading programs to cultivate a reading culture within the school community. GPM needs to encourage students to explore different genres, develop critical reading skills, and develop a lifelong love for reading.

Furthermore, Adam Zulkarnain and Amir Hassan (2014) in their study identified a few factors where reading culture is less practised among the students due to the break time short, lack of encouragement from teachers, lack of reading activities, and less support from the administration on the SRC development. Teachers need to motivate students to read as the study by Baba and Affendi (2020) found that teachers influence the reading habits and attitudes of students. Therefore, as per agreed by Usman (2016), the school administration needs to support the SRC development and all the reading activities to make sure that the students get the benefits of education.

Guiding the students with information literacy skills is crucial. The GPMs' expertition in information literacy is important (Zailani et al., 2013). The study conducted by Mayasari et. al (2020) on secondary school students in Malaysia showed that there is a significant in GPM expertise in information literacy to the student's motivation. Thus, the GPM needs to master information literacy skills in the

first place (Kamal & Othman, 2012). GPM needs to study literacy skills through related books reading, courses, and others to enhance their knowledge.

Besides that, Educational Technology Division (ETD) also has introduced and implemented various library reading programs in school including *Dekad Membaca*, *Nadi Ilmu Amalan Membaca* or NILAM to inculcate reading habits among children as well as to encourage students and boost their interest in reading, thus enhance their learning (Noreha et al., 2022). Upholding the reading programs, ETD also emphasizes the implementation of the Information Literacy Programme in schools. In addition, Mohd Hafiz et al. (2022) in their study revealed that Malaysia libraries have implemented lots of Reading Programmes to inculcate reading habits and all the programs had achieved the objectives.

RESEARCH OBJECTIVES

a. To review the literature on the importance of the SRC for students' information literacy skills development.
b. To review the literature on the Big6 Information Literacy Model.
c. To review the literature on the roles of GPM in students' information literacy skills development based on the Big6 Information Literacy Model.
d. To propose the conceptual model on the application of the Big6 Information Literacy Model and the usage of SRC as learning resources to enhance students' learning.

LITERATURE REVIEW

Information Literacy

Doyle (1994) defines information literacy as the skill to effectively obtain, evaluate, and apply information from various sources. Olubiyo (2023) further defines information literacy skills as the set of skills: to find, retrieve, analyse, and use information. Information literacy is not just about accessing information; it is about developing the skills to navigate the vast sea of information, discerning reliable sources, and using information ethically and responsibly. Information literacy skills enable individuals to effectively search for and retrieve information using various tools and platforms. This includes utilizing search engines, online databases, libraries, and other resources to locate relevant and reliable information that meets their needs. Information literacy skills help individuals determine the authority, accuracy, and objectivity of sources, enabling them to make informed judgments and decisions based on reliable information. In addition, information literacy skills enable individuals to analyse and interpret information effectively. This includes the ability to critically evaluate the content, identify biased or misleading information, and draw well-founded conclusions. Information literacy promotes critical thinking and empowers individuals to approach information with a discerning eye, enabling them to distinguish between fact and opinion and make reasoned judgments based on evidence. Information literacy extends beyond simply consuming information; it

involves utilizing information to solve problems, make decisions, and create new knowledge. It encompasses the ability to synthesize and apply information in various contexts, whether in academic research, professional settings, or everyday life. Information literacy skills enable individuals to think critically, solve complex problems, and communicate ideas effectively based on the information they have gathered. Based on the book published by Educational Resources and Technology Sector in 2017, information literacy skills based on the Big6 Information Literacy Model consist of task definition, information-seeking strategies, location and access, use of information, synthesis, and evaluation (BTP, 2017). The most relevant model for information literacy skills is Big6 Information Literacy Model proposed by Mike Eisenberg and Robert Berkowitz in 2001. Therefore, information literacy can be defined as the set of skills and competencies necessary to locate, evaluate, analyse, and use information effectively and ethically.

The Big6 Information Literacy Model

The Big6 Information Literacy Model provides a structured and comprehensive approach to information literacy skills development. The Big6 Information Literacy Model has been widely used for curriculum development and problem-solving framework. Mike Eisenberg and Robert Berkowitz (2001) originally invented the Big6 Model consisting of six stages include task definition, information seeking strategies, location and access, use of information, synthesis, and evaluation. Furthermore, the six stages in Big6 Model have then been divided into substages accordingly.

The first stage, task definition, can be divided into two substages, (i) determine and define the problem, and (ii) identify the information needed. This stage emphasizes the importance of clarifying objectives, understanding requirements, and setting goals before embarking on the information-seeking process. By clearly defining the task, the students can focus their efforts and ensure that the information they gather is relevant and useful. Following that, the second stage, liformation seeking strategies is then divided into two substages; (i) determine the source of information, and (ii) select the best source. The students are encouraged to explore a variety of resources, such as books, websites, databases, and experts in the field. This stage emphasizes the need for critical thinking, evaluation of sources, and selecting appropriate information channels to acquire reliable and accurate information. The third stage, location and access consists of two substages, namely (i) locate information sources, and (ii) find information. This stage highlights the importance of utilizing various search tools, understanding how to navigate libraries or databases, and knowing how to access and retrieve information effectively. It encourages individuals to evaluate the credibility and relevance of sources during the search process to ensure they are obtaining high-quality information. Use of Information, stage four, consists of two substages called (i) to engage the information, and (ii) extract information. Step four is to emphasizes the need for critical analysis, synthesis, and interpretation of the information gathered. Individuals are encouraged to organize and present the information in a way that effectively addresses the task or problem at hand.

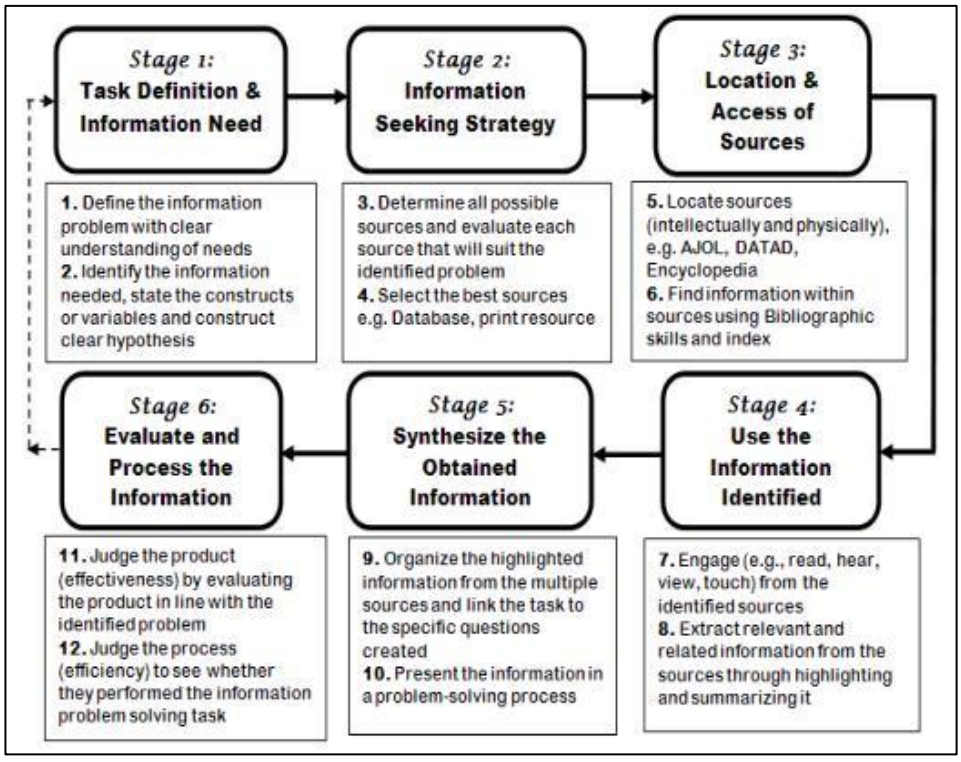
Following that, the next stage, synthesis comprises two substages namely, (i) the organization of information, and (ii) information presentation. This stage emphasizes the importance of critical thinking, analysis, and creativity in organizing

and presenting the information to meet the desired objectives. It encourages individuals to think critically about the information they have gathered and how it can be applied to solve the problem or answer the question. The final stage is Evaluation, comprising two stages: evaluation of the product and evaluation of the process. This stage encourages self-reflection, evaluation of the effectiveness of the information gathered, and identification of areas for improvement. By reflecting on the process, individuals can refine their information literacy skills and become more efficient and effective in future information-seeking endeavours.

In addition, Buba (2022) further modified the original Big6 Information Literacy Skills Model and elaborate on each stage in detail as depicted in Figure 1 below. Buba (2022) has renamed the original name of Stage 1 from "task definition" to "task definition and information need". Furthermore, Stage 6 has been renamed to "evaluate and process the information" compared to the original name of the "evaluation". The name for the other stages is the same, however, Buba (2022) further elaborates on each stage with a detailed process.

By following the six stages of the Big6 Information Literacy Model, the students can navigate the information landscape with confidence, critically evaluate sources, and effectively use the information to solve problems and make informed decisions.

Figure 1
Modified Big6 Information Literacy Skills Model (Buba, 2022)



The Importance of Information Literacy Skills

Mastering information literacy skills is essential for students to explore further throughout their learning (Robiah & Noraddandy, 2008). In a world flooded with information, being able to distinguish between reliable and unreliable sources is essential to avoid misinformation and make well-founded judgments. With information literacy skills, the students will be able to strengthen their existing knowledge through further reading and seeking information from various sources. However, Robiah and Noraddandy (2008) in their study identified that the usage of SRC among students is low due to the student's lack of information literacy skills. In addition, Zhao et al. (2023) added that the students who trained with information literacy skills are better at seeking information compared to the students without training.

Buba (2022) in a study on Nigerian Universities students revealed that information literacy skills are essential as guidance to assist students to synthesize and evaluate the strategies for problem-solving. In addition, information literacy skills also help students to boost their critical thinking while solving the problems in learning. In 21st century, with the emergence of internet technology, students are connected through a worldwide networking. Internet has become the main platform for students to exchange information and developing their information literacy skills in the virtual information society. Thus, Naik and Padmini (2014) stressed students should learn and further added information literacy in the information age as information literacy to be taught as the foundation in college. Mastering information literacy skills, especially efficient searching techniques, and information evaluation, are important (Ali et al., 2010). By developing information literacy skills, students can avoid falling prey to misleading information and make well-informed decisions based on reliable sources.

Information literacy skills also empower individuals to ethically and responsibly use and share information (Shashikala, 2023). Understanding copyright laws, intellectual property rights, and proper citation practices are essential to avoid plagiarism and upholding ethical standards in research and academic work. Kranich (2001) emphasized that copyright is essential for protecting intellectual property and fostering creativity. Naik and Padmini (2014) further stressed the importance of mastering information literacy skills as students learn on the copyright, gain rich information, and become independent learners. Therefore, Wong (2023) stressed that GPM plays a vital role to guide students with information literacy skills to seek information from authentic sources and thus evaluate the information.

The Roles of GPM in Students' Information Literacy Skills Development

There is no professional librarian posted in Malaysia primary and secondary school specifically to manage SRC in school. However, GPM, a non-profession librarian, selected teacher who officially appointed by State Education Department to help and manage the SRC. Apart from managing SRC, GPM is the main person who is in charge and guides the students towards information literacy skills development. GPM extends beyond simply managing the library; they serve as educators, information specialists, and advocates for information literacy. In the book "*Buku Panduan Pengurusan Pusat Sumber Sekolah Abad ke 21*" published by ETD in 2017, the book stated that GPM should teach information literacy during the sit-in period as GPM can utilize the period with a set of tasks or projects for students to complete (BTP, 2017).

While teaching information literacy skills, GPM should guide the students along the information-seeking process until the final presentation.

Mayasari et al. (2020) further added that GPM should focus on school library programmes, thus educating the students with information literacy skills: access, use, manage and evaluate the information. In the school facilitated with internet, GPM can guide the students applying the information literacy skills to use keywords as the key to search for specific information through internet. As a result, the students slowly develop their information seeking skills. After gathering the information, GPM needs to focus on guiding the students to filter the information before applying the information in their learning. Besides, GPM is responsible for curating and managing the library's collection of books, digital resources, and other materials. They assess the needs and interests of students and teachers and select resources that support the curriculum, foster reading culture, and cater to diverse learning styles and abilities. GPM stay updated with current literature and educational trends to ensure the collection remains relevant and engaging. As the learning resources in SRC are significant important and useful for the students and teachers in the schools with poor and no internet access.

Besides that, GPM needs to utilize the SRC as the main information centre for students to seek for information. For schools with poor and no internet connection, the teachers and students are fully depending on the SRC as the main learning resource. Most of SRC consists of the fiction and nonfiction books. The primary and secondary school libraries in Malaysia apply the Dewey decimal system classification (DDC) for nonfiction books categorization. However, in some of the rural primary schools, the GPM prefer using the colour coding to label the books just to differentiate the books based on language, fiction, and nonfiction instead of applying DDC labelling. The primary school GPM usually categorize the books to two categories namely, fiction and nonfiction books. Vice versa, GPM in secondary schools usually applying DDC to categorize the massive collection of books. The fiction books consist of story books while the nonfiction books consist of the books in fact. Based on DDC, the nonfiction books are labelled using number 000 through 900. The collection of books in SRC are important as students can utilize the knowledge in the book to help them to develop their existing knowledge. Therefore, it is crucial for GPM to guide the students with information literacy skills to identify and locate the relevant subjects faster while searching for information.

Besides, GPM can assist the students through Project Based Learning (PBL) by guiding them to seek further information through various resources in SRC. GPM needs to introduce and guide the students with different learning sources in SRC such as books, magazines, newspapers, journals, and so forth. Instead of searching the information resource for students, GPM should give the students autonomy and freedom to seek information from different learning sources. As a result, the students are not restricted to search information through the books but they have a variety of choices to seek for information. However, GPM should guide the students on how to verify the authenticity of the information they gather from different sources before they apply and use the information.

In a nutshell, GPM plays a multi-faceted role in the educational ecosystem. They provide information literacy instruction, curate resources, promote reading,

support classroom instruction, foster digital citizenship, and engage the school community. GPM is essential in equipping students with the skills and knowledge necessary to navigate the information landscape and become critical thinkers, and lifelong learners.

Internet in Learning

The internet provides a vast and diverse repository of information that is accessible with just a few clicks (Torres, 2016). Amponsah et al. (2022) in their study showed that the internet is vital to boost academic performance. Students can search for information on any subject, accessing a wealth of resources such as articles, e-books, videos, and scholarly journals. This accessibility allows for more comprehensive and in-depth research, enabling students to explore a wide range of perspectives and engage with up-to-date information. The internet offers a rich array of multimedia resources that cater to diverse learning styles. Students can access educational videos, interactive simulations, infographics, and podcasts that provide engaging and interactive learning experiences. Multimedia content helps to reinforce concepts, improve retention, and make learning more enjoyable and interactive.

The internet allows students to connect their learning to real-world contexts. The students can access news articles, case studies, and primary sources that provide current and relevant information. Students can explore how concepts learned in the classroom apply to real-life situations, enhancing their understanding and critical thinking skills. The internet is a powerful tool for lifelong learning and professional development. Students can continue learning outside of the classroom by accessing online courses, webinars, and tutorials. The internet has transformed learning by providing instant access to vast amounts of information, fostering global collaboration, offering multimedia learning resources, supporting personalized learning experiences, connecting learning to real-world contexts, facilitating resource sharing, and enabling lifelong learning. As technology continues to advance, the internet will undoubtedly play an even more significant role in enhancing the educational experience and empowering learners of all ages (Suaad et al., 2023).

SRC in Learning

SRC or school library is the main information resource centre in education institutes including primary, secondary and tertiary. SRC serves as a centralized space where students, teachers, and staff can access a wide range of resources to support learning, research, and personal development. SRC becomes an important community hub and place for students to conduct learning activities such as study group, group discussion, projects, and others. The students can utilize the SRC as the platform for them to exchange their ideas while searching information for their projects or assignments.

SRC is the media and technology hub in schools. In SRC, despite the collection of books on book racks, SRC also provides the technology facilities such as internet access, digital learning and multimedia resources compiled in USB, CD and DVD format, various computer devices, and electronic learning sets such as robotic project kits which allow students to utilize for their learning. As a result, the students can easily create, develop and complete their digital project in SRC.

In primary school, the students go to SRC for leisure reading and the NILAM programme. Students prefer to read non-book materials including magazines, fiction books, and newspapers, rather than non-fiction books (Lee & Abu, 2005). Adam Zulkarnain and Amir Hassan (2020) added that the purposes for students to read are for entertainment, leisure, and examination. Besides, the SRC is not fully utilised as the SRC is only used as a place to store books, and other media collections rather than used for information literacy by students. GPM can schedule a timetable for students to enter the SRC for information seeking. In addition, GPM also should promote new books and other collections to attract students to visit the SRC.

One of the primary roles of a SRC is to promote and foster reading culture among students. The utilization of SRC in teaching and learning benefits the students learning. Nor Ahmad and Zurinah (2020) in their study explained that the functions of SRC are to enhance the quality of teaching and learning, provide guidance for teachers to advance their teaching, distribute and evaluate the information resources, inculcate reading habits, and cooperate with agencies to increase the collection of information resources in SRC. Apart from that, there are a few factors for using SRC, including the teacher's teaching method, seeking information to complete tasks or projects, reading habits, activities conducted by SRC, and academic performance level (Robiah & Noraffandy, 2008).

One significant benefit of utilizing SRC is the opportunity for independent learning and self-directed exploration. Students can explore subjects of interest beyond what is covered in their regular curriculum. By accessing a wide range of books, magazines, and online resources, they can expand their knowledge, develop a deeper understanding, and satisfy their curiosity about various topics. SRC empowers students to take ownership of their learning journey and encourages them to pursue areas that align with their passions and aspirations. Besides becoming the place for students to read, is the best place for students to advance their knowledge through the correct information literacy guided by GPM. For instance, the knowledge of sciences learnt through classroom lessons can be enhanced through tasks or projects to encourage students to explore further through other resources including the collection of encyclopaedias, magazines, newspapers and the internet. As a result, the students learnt through other information sources which help them to strengthen their knowledge of certain sciences concepts.

The involvement of school administration and teachers in promoting the usage of SRC in learning is crucial (Kankam, 2013). Boon and Selemin (2010) in their study revealed that the level of teachers' knowledge of the role of the SRC in teaching was at a moderate level. Apart from that, the least used by teachers due to a lack of resources in SRC and most of the books are in English (Mohd Ahmin et al., 2016). Siti Hadijah (2011) stressed that the principal or school headmaster also plays an important role in increasing the usage of SRC. The principal or school headmaster should be aware of the importance of SRC thus encouraging the teachers to utilize the SRC in their teaching (Nor Ahmad & Zurinah, 2020). While depending on the learning resources in SRC, the school administrator and teachers should improve the students' information literacy skills and encourage and guide the students to access the internet to seek information (Li et al., 2023).

In addition, the teachers should emphasize the usage of various learning sources in SRC while conducting their teaching and learning in the classroom (Dakhi et al., 2020). For example, while teaching a science subject a topic on animals, the teacher can assign a small project or task to students to search for extra information on different animals around the world and their habitats. The teacher then brings the students to SRC and guides the students with information literacy skills to search the relevant books at the book racks with DDC 500 Sciences and Mathematics. As a result, through the information searching, the students learn to explore the different animals around the world and their habitats.

In a school with poor or no internet connection, SRC becomes a helpful resource for students and teachers. Despite the limitations, the library serves as a hub of knowledge and information within the school community. While internet access may be limited or non-existent, the school library can still offer offline digital resources such as CD-ROMs, DVDs, and educational software. These resources can provide interactive and multimedia learning experiences that supplement classroom instruction and engage students in different ways. The library serves as a dedicated space for students to collaborate, study, and engage in independent learning. With limited internet access, the library provides an environment conducive to focused work and intellectual exploration. Students can gather in the library to work on group projects, consult reference materials, and engage in peer-to-peer learning. SRC becomes even more crucial in a context where internet access is limited. GPM can play a proactive role in providing information literacy instruction to students, teaching them how to effectively locate, evaluate, and use information from print resources. GPM can guide students in developing research skills, citation practices, and critical thinking abilities. GPMs' expertition and guidance are instrumental in ensuring that students can navigate and make the most of the available resources. The school library can foster a sense of community and engagement within the school. It can organize events, book clubs, and reading programs that promote reading culture, literary discussions, and intellectual curiosity.

In a nutshell, while a lack of internet connectivity may present challenges, a well-equipped and well-managed school library can compensate for these limitations as per agreed by Adnan (2020). By providing a wide range of print resources, offline digital resources, collaborative spaces, information literacy instruction, and community engagement, the school library becomes an essential resource for both students and teachers. It fosters a love for learning, supports academic pursuits, and ensures that students have access to knowledge and information necessary for their educational development. In addition, a conducive SRC can becomes a centre for cultural exchange which encourages a culture of reading and provides a shared interest for students and teachers.

DISCUSSION AND CONCLUSION

SRC is important and useful for students to seek information in their learning. The students can utilize the books, especially the non-fiction under DDC from 000 to 900 and other resources such as magazines, journals, and others to enhance their existing knowledge. Therefore, students are not limited to textbooks and classroom

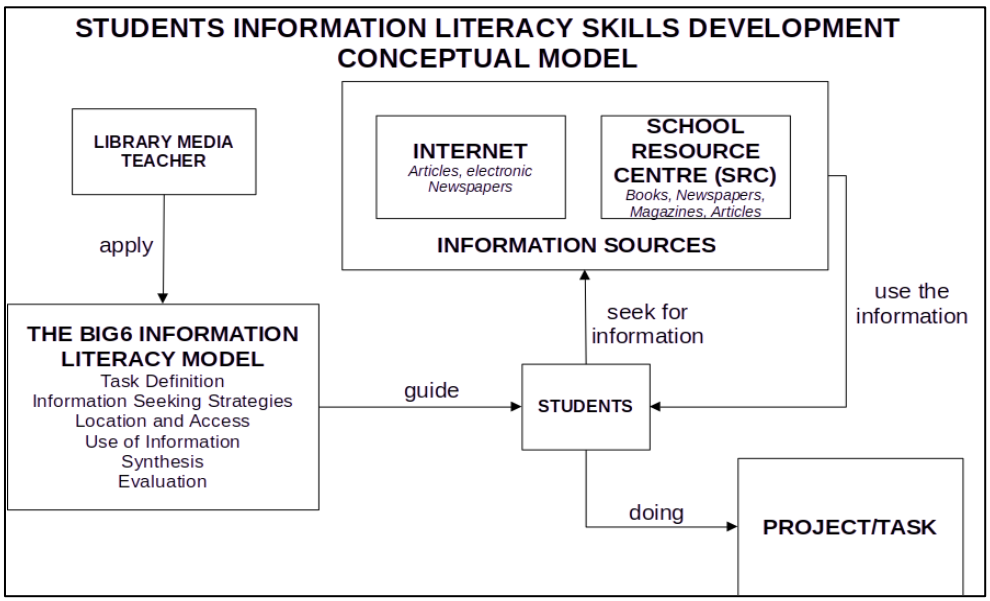
lessons as they can explore in depth what they have learnt through various resources in SRC. SRC is the main learning resource for schools with poor or no internet connection, especially in rural areas. Contrary, schools with good internet connections can utilize SRC as supporting information for learning. Therefore, the GPM must make sure that SRC is well-managed and provide a conducive environment for the students. In addition, GPM must make sure all the books and other physical learning resources are well organized on the book racks.

In addition, GPM is responsible for guiding the students with information literacy skills by applying the Big6 Information Literacy Model. While seeking information from different resources, especially from the internet, GPM needs to guide the students to verify the authenticity of the information. Apart from that, GPM needs to guide the students with library skills while searching for information in SRC. In primary school, GPM can guide the students with the fundamental and usage of DDC in searching books. For instance, GPM can guide the primary students on basic of DDC book categories such as the label 400 is for Language books, 500 for Sciences and Mathematics books and so forth. Conversely, in secondary school context, GPM can guide the students to explore and apply the knowledge on DDC to search for relevant books. As a result, the students can locate the books easily without wasting time searching for the book in SRC. Apart from that, the students are recommended to apply the steps in Big6 Information Literacy Model before they search for information to complete their task or project. In short, the roles of GPM in students' information literacy skills can be listed as follow; (i) to manage the learning resources in SRC, (ii) to cultivate reading habits among students, (iii) to teach and guide students with the Big6 information literacy skills utilizing various learning sources in learning, and (iv) to monitor students' information literacy skills development.

This study proposes a conceptual model for students' information literacy development as shown in Figure 1. The conceptual model depicts the relationship between information literacy skills and the usage of SRC as the learning resources for the students to seek information and develop their knowledge. In Figure 1, there are two situations, the application of information literacy skills and the usage of SRC in a school with a poor and no internet connection and a school with a good internet connection. In the first situation, the school with a poor or no internet connection, the GPM can fully utilize the SRC as the learning resource centre to help the students to develop their information literacy skills enhancing their learning. The students depend on physical resources such as books, articles, magazines and newspapers found in SRC. Contrary, situation 2 in Figure 1 shares the same process as situation 1. The only difference in situation 2 is the students have the opportunity to seek information through the internet and physical resources in SRC. The students are then able to combine both the information gathered from the Internet and physical resources in SRC. In both situations, the GPM play an important role to guide the students with information literacy skills based on the Big6 Information Literacy Skills Model. The GPM acts as an observer or facilitator during the information-seeking process. The GPM needs to guide the students, especially in evaluating the information gathered. The students apply the information literacy skills taught by the GPM in their project. In the end, the student presents their project to the GPM and the GPM evaluates their project.

Besides that, the model as shown in Figure 1 can be used as a guideline for teachers in their lessons. The figure below depicts the overall conceptual model for students' information literacy skills development. The conceptual model below shows the interconnection between the Big6 information literacy model and the usage of SRC by the students to complete their project or task. Apart from that, the education officer also can utilize the model to mentor and guide the GPM in their information literacy lesson development. As a result, the sit-in period in school will become meaningful as the students learn to seek information and use the information in their learning.

Figure 2
The Conceptual Model for Students' Information Literacy Skills Development



SUGGESTIONS FOR FUTURE RESEARCH

This study has proposed a conceptual model for students' information literacy skills development. The model is useful as a guideline for other researchers to conduct their study on students' information literacy skills development in primary, secondary and tertiary to seek new insight. The researcher also can study the two situations as proposed in the conceptual model as shown in Figure 1; (i) the school with good internet connectivity, and (ii) the school with a poor or no internet connection to investigate how the students applied the information literacy skills they learnt to seek, locate, use, synthesize, and evaluate the information gathered. The researcher is recommended to apply the qualitative approach using methods that include observation, and unstructured interviews to seek new insight. The researcher can interview the GPM and students to gather further information from different perspectives especially how the students apply the information literacy skills to explore further in their learning. Further data collection will strengthen and improve

the existing proposed conceptual model. In addition, the researcher also can apply the mixed method as well and test GPM and students' information literacy skills as the pre-result while cross-checking with the data gathered through the qualitative study later. Furthermore, the researcher can study and focus in-depth on how the students process the information gathered while applying the Big6 Information Literacy Skills steps of use of information, synthesis and evaluation. As a result, this will contribute new findings to the existing study.

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SISTEM EJAAN BAHASA BIDAYUH BAU

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ABSTRAK

Penyelidikan ini adalah mengenai pembinaan sistem ejaan bahasa Bidayuh Bau. Komuniti Bidayuh berhasrat bahasa ibunda mereka turut dipelajari secara formal di sekolah. Sehubungan itu, salah satu isu penting ialah memperkemaskan sistem ejaan bahasa berkenaan. Objektif kajian ini ialah mengenal pasti fonem asli bahasa Bidayuh Bau dan seterusnya menentukan padanan hurufnya. Data diperoleh dengan menyenaraikan perkataan didengar dalam perbualan harian, disusuli dengan penulisan transkripsi fonemik dan fonetik perkataan tersebut. Dapatan kajian menunjukkan bahasa Bidayuh terbina daripada tiga puluh fonem. Fonem /a, ɛ, e, i, ɔ, o, u/ merupakan vokal tulen manakala /ã, ɛ̃, ĩ, ɔ̃, ũ/ merupakan vokal terbitan. Dalam sistem ejaan, disarankan fonem vokal tulen serta pasangan sengaunya dipadankan dengan huruf yang sama. Misalnya, /a/ dan /ã/ dieja dengan huruf yang sama iaitu “a”. Setelah dipertimbangkan dengan teliti, disarankan fonem konsonan hentian glotis tidak dipadankan dengan huruf mahupun simbol. Tujuh belas fonem konsonan yang lain iaitu /b, d, g, h, ǰ, k, l, m, n, ŋ, ɲ, p, r, s, t, w, j/ masing-masing dipadankan dengan huruf rumi “b,d,g,h,j,k,l,m,n,ng,ny,p,r,s,t,w,y”. Diharap sistem ejaan ini bakal digunakan dengan meluas dalam penerbitan digital mahupun bercetak. Misalnya, penulisan buku *“Literasi Sina Bidoyoh: Rami Bipatun”.*

Kata kunci: Sistem ejaan, simbol fonetik, fonem, Bahasa Bidayuh Bau

ORTHOGRAPHY OF BIDAYUH BAU LANGUAGE

ABSTRACT

This study is about the orthography of the Bidayuh Bau language. It is inspired by the quest of the Bidayuh community to have the Bidayuh

language to be included in the formal national education system. One of the important issues that need to be resolved is the orthography of the language. The objective of this study is to identify phonemes of the language and then match each of them with a letter. Samples are gathered by listening to daily conversation and listing the words heard. Each word is analysed for its phonemic and phonetic transcription. Based on the samples, it is found that the Bidayuh Bau language has twenty phonemes. The pure vowels sounds are /a, ɛ, e, i, ɔ, o, u/ and its nasal forms are /ã, ɛ̃, ĩ, ɔ̃, ũ/. It is proposed that both the pure vowels and its nasal pair are to be represented by the same letter. Thus, /a/ dan /ã/ are spelled as "a". After much consideration, it is suggested not to use any alphabet nor symbol to indicate the glottal stop. The other seventeen consonants, /b, d, g, h, ǰ, k, l, m, n, ŋ, ɲ, p, r, s, t, w, j/ are represented by letters "b,d,g,h,j,k,l,m,n,ng,ny,p,r,s,t,w,y" respectively. Hopefully, this orthography could be used in both digital and printed materials. The first production using this orthography is a book, "Literasi Sina Bidoyoh: Rami Bipatun".

***Keywords**: Orthography, phonetic symbol, phoneme, Bidayuh Bau Language*

PENGENALAN

Terdapat pelbagai variasi Bahasa Bidayuh yang dituturkan komuniti di kepulauan Borneo yang meliputi negara Malaysia dan Indonesia. Secara tradisi, variasi utama bahasa Bidayuh di Malaysia dikenali sebagai Bidayuh Bau-Jagoi, Bidayuh Biatah, Bidayuh Serian dan Bidayuh Salako Lara (Ahi Sarok, 2017). Selepas usaha *Dayak Bidayuh National Association (DBNA)* menyeragamkan ejaan, variasi utama bahasa Bidayuh dikenali sebagai Bidayuh Bau, Bidayuh Biatah, Bidayuh Serian dan Bidayuh Salako. Skop kajian ini berfokus kepada pembinaan sistem ejaan bahasa Bidayuh Bau sahaja.

Bahasa Bidayuh Bau juga disebut sebagai *Sina Bidoyoh* oleh penutur jatinya. Dalam perspektif yang lebih luas, untuk membezakannya daripada variasi bahasa Bidayuh yang dituturkan oleh penduduk lain di kepulauan Borneo, istilah yang lebih jitu baginya ialah "Bahasa Dayak Bidayuh Bau". Dalam penulisan ini istilah "Bahasa Dayak Bidayuh Bau", "Bahasa Bidayuh Bau" dan "Sina Bidoyoh" adalah merujuk kepada entiti yang sama. Penutur jati *Sina Bidoyoh* ialah etnik Bidayuh yang berada atau berasal dari daerah Bau, Sarawak.

Hasrat komuniti Bidayuh ialah supaya bahasa Bidayuh dipelajari secara formal di sekolah. Untuk mencapai hasrat ini, bahasa Bidayuh perlu ada sistem ejaan yang mantap. Hasrat inilah yang menjadi pendorong kajian ini dilaksanakan.

LATAR BELAKANG

Dalam konteks merealisasi hasrat bahasa Bidayuh dipelajari di sekolah, tumpuan utama sekarang adalah memenuhi semua syarat yang diperlukan. Antara syaratnya, hendaklah mempunyai kandungan ilmu yang mencukupi untuk disampaikan (Asmah Omar, 2015). Maka, bahan penulisan mengenai bahasa Bidayuh dan hasil karya dalam bahasa Bidayuh perlu diperbanyakan. Justeru, perlu ada sistem tulisan yang konsisten mudah untuk diterima pakai.

Sistem ejaan yang berkesan boleh dinilai berdasarkan dua aspek utama. Aspek pertama ialah kesesuaian perlambangan bunyi bahasa tersebut. Aspek kedua pula ialah penerimaan bakal penggunanya. *SIL International* mengungkapkan kriteria ortografi yang efektif sebagai:

> *"...To be effective, an orthography must be **acceptable** to the people who will use it, and also **usable**, in terms of characters matching the sounds of the language..." (SIL International, n.d.)*

Untuk kejituan ejaan yang tinggi, satu bunyi hendaklah dipadankan dengan satu perlambangan. Dengan demikian, semua fonem sesuatu bahasa dapat dipadankan dengan suatu huruf mahupun simbol. Perlambangan khusus untuk fonem berkenaan boleh direka sebagai alternatif kepada huruf dan simbol sedia ada (McEnery & Wilson, 2001).

Bahasa Iban boleh dieja menggunakan huruf rumi dan juga perlambangan khusus yang direka oleh Dunging Gunggu dan dimurnikan oleh Bromeley Philip (2010) ditunjukkan oleh Rajah 1 di bawah.

Rajah 1
Alphabet Iban dikarang oleh Dunging Gunggu

Perlambangan bunyi bahasa Iban adalah ilham asal oleh Duging Gunggu dan seterusnya telah dimurnikan oleh Bromeley Philip (*Onniglot the online encyclopedia of writing system & languages, n.d.*). Rajah 2 di bawah menerangkan mengenai perlambangan bunyi tersebut.

Rajah 2
Perlambangan bunyi bahasa Iban ilham asal oleh Duging Gunggu dan dimurnikan oleh Bromeley Philip

Walau bagaimanapun, huruf Dunging ini jarang diamalkan. Bahasa Iban sering ditulis dengan huruf rumi dengan padanan fonem (Onniglot the online encyclopedia of writing system & languages, n.d.). Hal ini ditunjukkan dalam Rajah 3 di bawah.

Rajah 3
Padanan fonem bahasa Iban dengan huruf rumi

Iban pronunciation

Vowels

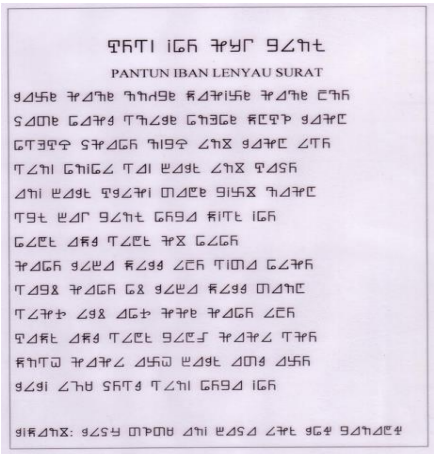
a	e	i	o	u	ə
[a]	[e]	[i]	[o]	[u]	[ə]

Consonants

b	c	d	f	g	h	j	k	l
[b]	[tʃ]	[d]	[p]	[g]	[h]	[ʤ]	[k]	[l]
m	n	p	q	r	s	t	v	w
[m]	[n]	[p]	[q]	[r]	[s]	[t]	[b]	[w]
x	y	z						
[s]	[j]	[ʤ]						

Contoh penulisan teks bahasa Iban dalam huruf Duging ditunjukkan dalam Rajah 4 manakala yang berhuruf rumi adalah seperti dalam Rajah 5 di bawah. Sementara, Rajah 6 menunjukkan teks bahasa Bidayuh yang ditulis dalam huruf rumi (Onniglot the online encyclopedia of writing system & languages, n.d.).

Rajah 4
Contoh teks bahasa Iban dalam huruf Dunging

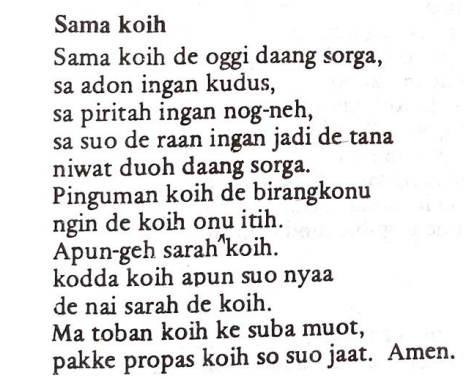


Rajah 5
Contoh teks bahasa Iban (The Lord's Prayer) dalam tulisan rumi.

Apai kami di serega
Kudus mih nama nuan
Datai mih perintah nuan
Jadi peneka nuan
Baka ka dalam serega
Bakanya dalam bumi.
Meri ka kami
Pengidup tiap ari.
Ampunka penyalah kami
Baka ka kami ti
Ngampunka urang
Ti salah ngelaban kami
Intu kami ari penguji
Lepas ke kami ari penyai
Laban nuan ti bempu perintah
Enggau kuasa enggau mulia
Dataika belama-lama iya
Amin

Contoh teks bahasa Bidayuh Bau *(The Lord's Prayer)* dalam tulisan rumi turut berada dalam buku doa terbitan Gereja St. Stephen, Bau (Gereja St. Stephen, 1994). Rajah 6 menunjukkan tulisan rumi tersebut.

Rajah 6
Contoh teks bahasa Bidayuh Bau (The Lord's Prayer) dalam tulisan rumi.



Sama koih
Sama koih de oggi daang sorga,
sa adon ingan kudus,
sa piritah ingan nog-neh,
sa suo de raan ingan jadi de tana
niwat duoh daang sorga.
Pinguman koih de birangkonu
ngin de koih onu itih.
Apun-geh sarah koih.
kodda koih apun suo nyaa
de nai sarah de koih.
Ma toban koih ke suba muot,
pakke propas koih so suo jaat. Amen.

PERNYATAAN MASALAH

Salah satu isu utama bahasa Bidayuh Bau ialah sistem ejaannya yang pelbagai. Terdapat pelbagai cara suatu perkataan dieja dan semuanya betul berdasarkan strategi ejaan masing-masing (Netti Yuniarti, 2019). Salah satu daripada punca kepelbagaian ini berkaitan dengan keunikan sebutan bahasa Bidayuh Bau iaitu hentian glotis (De Vega, 2013; Jecky Misieng, 2017). Sebagai contoh, perhatikan ejaan semasa untuk perkataan "*kodda*" (seperti), "*otto*" (kita) dan "*sama*" (bapa). Semua perkataan itu diakhiri dengan hentian glotis, namun ejaannya tidak konsisten. Jika strategi menggandakan konsonan untuk menandakan unsur hentian glotis tekal, maka ejaan yang sepatutnya ialah "*ko**dd**a*", "*o**tt**o*" dan "*sa**mm**a*". Manakala, jika memilih untuk tidak menggunakan apa-apa huruf sebagai indikator hentian glotis, maka ejaannya sepatutnya ialah "*koda*", "*oto*" dan "*sama*".

Dalam bahasa Melayu, ujaran /ʔ/ dan /k/ tidak membezakan makna. Maka jika huruf "k" boleh dipadankan dengan ujaran hentian glotis /ʔ/ dan juga konsonan /k/, seperti dalam perkataan "kakak", "pokok" dan "duduk", ia tidak menimbulkan kekeliruan.

Sebaliknya, dalam bahasa Bidayuh, ujaran /ʔ/ dan /k/ adalah bertaraf fonem iaitu boleh membezakan makna. Misalnya dalam ejaan perkataan "*kodok*". Jika fonem akhir dalam perkataan "*kodok*" ialah /k/, makna perkataan itu ialah "menghidu". Manakala, jika fonem akhir dalam perkataan "*kodok*" ialah hentian glotis /ʔ/, makna perkataan itu ialah "pendek".

Kepelbagaian cara eja hentian glotis /ʔ/ merupakan punca utama wujud variasi ejaan dalam bahasa Bidayuh. Misalnya dalam menentukan ejaan bagi perkataan seperti "*kodo*" yang bermakna "pendek". Variasi pertama ialah menggandakan konsonan. Justeru, ejaannya ialah "*ko**dd**o*". Variasi kedua ialah gunakan huruf "h", maka ejaannya salah "*kodo**h***". Variasi ketiga adalah dengan

menggunakan simbol apostrofi atau simbol lain, maka ejaannya ialah "*kodo***'**". Variasi keempat ialah tidak menggunakan apa-apa huruf mahupun simbol sebagai indikator hentian glotis, maka ejaannya ialah "*kodo*".

Selain hentian glotis, kepelbagaian ejaan juga wujud berikutan unsur sengauan. Penggunaan pasangan huruf senyap, kononnya untuk menyekat sengauan boleh mendatangkan kekeliruan sebutan (Williams, 2023). Berdasarkan konsep ini, huruf senyap "**d**' dipadankan dengan konsonan "**n**", huruf senyap "**b**" dipadankan dengan konsonan "m", manakala huruf senyap '**j**" dipadankan dengan huruf 'y'. Tujuannya adalah untuk menandakan vokal selepas huruf senyap tidak disengaukan.

Justeru, perkataan '*sina*' (bercakap, bahasa) akan dieja sebagai '*sin**d**a*'. Perkataan '*oma*' (lama) akan dieja 'om**b**a'. Perkataan '*janyi*' (janji) dieja sebagai 'jany**j**i'. Risiko konsep ini adalah salah lafaz, di mana 'si.nda' mungkin akan juga dilafaz sebagai 'sin.da', 'o.mba' dilafaz sebagai 'om.ba' dan 'ja.nyji' dilafaz 'ja.ny.ji'. Ini dilihat sebagai kekeliruan dari perspektif dalaman,

Selain kekeliruan dalaman, konsep penggunaan huruf senyap ini juga akan menimbulkan kekeliruan antara bahasa (Netti Yuniarti, 2019). Misalnya, jika perkataan '*bona*' (tempayan) dieja sebagai 'bonda'. Perkataan bahasa Bidayuh '*bonda*' (tempayan) mempunyai sebutan dan makna yang berbeza dengan perkataan bahasa Melayu 'bonda'(ibu). Ejaan 'bonda' akan mempunyai dua sebutan berbeza iaitu 'bo.nda' (bahasa Bidayuh dengan penggunaan huruf senyap 'd') atau 'bon.da' (bahasa Melayu yang sama makna dengan 'ibu'). Ada kemungkinan nanti, perkataan bahasa Melayu "bonda" tidak dilafaz sebagai "bon.da", tetapi "bo.nda" (bahasa Bidayuh yang bermaksud 'tempayan').

Ejaannya akan menjadi lebih rumit jika perkataan itu mempunyai variasi sebutan (Rensch, 2012; Jennifer Jamesle, 2020). Misalnya, perkataan "*sino*" (ibu) ada tiga variasi sebutan iaitu /sinɔʔ/, /sinoʔ/ dan /sinəʔ/. Ketiga-tiga variasi sebutan boleh dieja "*sindo*'" atau "*sindok*". Ejaan "*sindo*'" menepati gabungan konsep penggunaan huruf senyap "d" dan tanda apostrofi untuk hentian glotis. Manakala ejaan "*sindok*" menepati gabungan konsep penggunaan huruf senyap "d" serta huruf 'k' untuk hentian glotis. Dalam pada itu, variasi bagi ejaan "*sino*" iaitu "s*indok*" akan homograf dengan ejaan variasi ejaan perkataan "*sinok*" (dekat) iaitu "*sindok*" (/sɪnɔk/).

Dari perspektif lain, diperhatikan ejaan "*sindok*" merupakan homograf iaitu suatu perkataan yang mempunyai ejaan yang sama tetapi berlainan sebutan dan makna. Makna pertama ialah "ibu" dan makna kedua ialah "dekat". Inilah permasalahan penggunaan huruf "b" dan "d" sebagai indikator suatu vokal itu bukan vokal sengau. Kecelaruan dapat dikurangkan jika dieja tanpa strategi mengguna huruf senyap. Justeru, "*sino*" (ibu) dieja sebagai "*sino*" dan "*sinok*" (dekat) dieja sebagai "*sinok*"? Berdasarkan permasalahan ini maka perlu ada sistem ejaan bahasa Bidayuh yang konsisten, mudah serta tidak mendatangkan ancaman kepada bahasa itu.

OBJEKTIF KAJIAN

Objektif kajian ini ialah untuk membentuk sistem ejaan bahasa Bidayuh Bau yang berasaskan padanan fonem asli dengan huruf rumi dan seterusnya mengaplikasinya dalam penulisan.

PERSOALAN KAJIAN

Untuk mencapai objektif membentuk sistem ejaan bahasa Bidayuh Bau berasaskan padanan fonem asli bahasa Bidayuh Bau dengan huruf rumi, maka berikut merupakan soalan kajian:

a. Apakah fonem vokal asli bahasa Bidayuh Bau?
b. Apakah fonem konsonan asli bahasa Bidayuh Bau?
c. Apakah padanan huruf atau simbol bagi setiap fonem asli bahasa Bidayuh Bau?

TINJAUAN LITERATUR

Secara amnya, perkembangan sistem ejaan bahasa Bidayuh Bau terbahagi kepada tiga belas fasa.

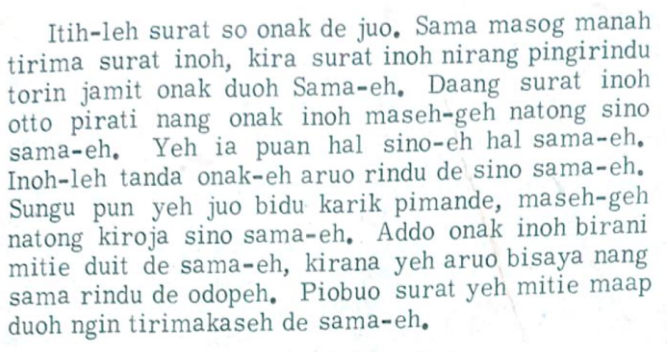
Fasa pertama ialah kewujudan bahasa Bidayuh dalam bentuk lisan sahaja (Mary et al., 2015). Di peringkat ini, fungsi utama bahasa meliputi komunikasi sosial, hiburan dan interaksi dengan *Topa* (Pencipta). Pelbagai cerita dongeng diperdengarkan kepada kanak-kanak sebelum waktu tidur untuk menyemai nilai dan hiburan. Ayun biasanya didendangkan untuk mendodoi anak. Lagu didendangkan oleh para *dayung borih* semasa upacara *gawia*. Di fasa lisan ini, tiada huruf atau simbol digunakan untuk mengeja bahasa Bidayuh.

Fasa ke-2 pula adalah peralihan dari bahasa lisan ke bahasa tulisan. Kedatangan mubaligh yang memilih untuk menyampaikan ilmu agama menggunakan bahasa tempatan telah membuka lembaran baharu dalam perkembangan bahasa Bidayuh. Penggunaan huruf rumi untuk menulis bahasa Bidayuh Bau dipelopori para mubaligh. Di antara mereka ialah paderi Rev. Fr. Luis Schwabl. Maka terbitlah buku mengandungi doa dan panduan hidup yang dikarang dalam bahasa Bidayuh. Para mubaligh juga mendirikan sekolah. St. Stephen *Primary School* dibina pada tahun 1947 dan kini dikenali sebagai SK St. Stephen. Pendidikan yang diasaskan para mubaligh telah melahirkan golongan penutur jati bahasa Bidayuh yang celik huruf.

Fasa ke-3 ialah pemurnian sistem ejaan yang berasaskan huruf rumi. Para paderi dan golongan penutur jati yang celik huruf telah memurnikan lagi sistem ejaan yang diperkenalkan pada fasa kedua. Sistem ejaan yang dimurnikan ini juga digunakan untuk mengarang buku berkaitan agama, termasuk menulis terjemahan kandungan kitab (Calvin et al., 2006). Dalam tahun 1970an hingga 1980an, Rev. Fr.

Luis Schwabl bersama En. Felix Sipel anak Nyowet serta individu lain telah menulis banyak bahan bacaan keagamaan dalam bahasa Bidayuh Bau. Misalnya *"Kajuog Idip Ngosok Jesus"* dan *"Bua-bua Ajar So Kitab Baibl Pakai Daang Onu Mingu Duoh Onu De Ayuh"* (Felix Sipel et al., 1986). Rajah 7 menunjukkan petikan teks buku *"Kajuog Idip Ngosok Jesus"* sebagai contoh sistem ejaan yang dimurnikan.

Rajah 7
Petikan teks buku "Kajuog Idip Ngosok Jesus"



Itih-leh surat so onak de juo. Sama masog manah tirima surat inoh, kira surat inoh nirang pingirindu torin jamit onak duoh Sama-eh. Daang surat inoh otto pirati nang onak inoh maseh-geh natong sino sama-eh. Yeh ia puan hal sino-eh hal sama-eh. Inoh-leh tanda onak-eh aruo rindu de sino sama-eh. Sungu pun yeh juo bidu karik pimande, maseh-geh natong kiroja sino sama-eh. Addo onak inoh birani mitie duit de sama-eh, kirana yeh aruo bisaya nang sama rindu de odopeh. Piobuo surat yeh mitie maap duoh ngin tirimakaseh de sama-eh.

Fasa ke-4 merupakan peluasan fungsi bahasa Bidayuh bertulis. Dalam fasa ini, bahasa Bidayuh bertulis bukan hanya meliputi perkara berkaitan keagamaan, malahan merangkumi penulisan berita untuk siaran radio. Saluran Radio Bidayuh yang disiarkan Rangkaian Radio Sarawak dilancarkan dalam bulan Jun 1963. Siaran berita radio disampaikan dalam tiga variasi bahasa Bidayuh iaitu Bau-Jagoi, Bukar-Sadong dan Biatah.

Fasa ke-5 pula ialah usaha penyeragaman sistem ejaan bahasa Bidayuh. Usaha ini diterajui Dayak Bidayuh National Association (DBNA) mulai tahun 2000. Satu siri kajian telah dilaksanakan dengan kerjasama sukarelawan pakar bahasa daripada *SIL International* untuk tujuan menyeragamkan sistem ejaan bagi semua variasi bahasa Bidayuh. Jika inisiatif penyeragaman ini berjaya, maka semua variasi bahasa Bidayuh akan menggunakan sistem ejaan yang sama. Satu sistem yang seragam telah dipersetujui majoriti pada 10 Ogos 2003 (Rench et al., 2012). Butiran penyeragaman ejaan bahasa Bidayuh ditunjukkan dalam Jadual 1 di bawah.

Jadual 1
Butiran penyeragaman ejaan bahasa Bidayuh

Sebutan	Ejaan Semasa			Ejaan Seragam	
	Bau	Kuching	Serian	Dicadang	Diterima
[ɑ]	a	a	a	a	a
[ə]/[ǎ]		a	a	e	e
[iə]/[ɛ]	ie	e	e	é	é
[i]	i	i	i	i	i
[uə]/[ɔ]	uo	o	o	o	o
[ɔ]/[ɯ]	o	ŭ	u (ŭ/û)	ø or ŭ/û	ŭ
[u]	u	u	u	u	u

Berdasarkan saranan ini, perkataan Bidayuh Bau, 'ik***ie***n' (ikan) akan dieja sebagai 'ik***e***n', 'ob***uo***' (habis) dieja '***ŭ***b***o***' dan 'sin***o***' (ibu) akan dieja 'sin***ŭ***'. Setelah meneliti maklum balas pengguna, penyeragaman menyeluruh seperti dipersetujui perlu dimurnikan lagi. Untuk lebih praktikal skop keseragaman telah dihadkan dalam lingkungan empat variasi utama bahasa Bidayuh sahaja.

Justeru, untuk tujuan ortografi, bahasa Bidayuh dikelaskan kepada empat variasi utama iaitu Bidayuh Bau, Bidayuh Biatah, Bidayuh Serian dan Bidayuh Salako. Setiap variasi utama ini mempunyai sistem ejaan tersendiri seperti yang digunakan dalam buku daftar kata yang diterbitkan susulan daripada usaha penyeragaman sistem ejaan. Empat buah buku tersebut ialah (Rajah 8):

i. Buk Bang Sinda Bidayuh Bau - English - Malay
ii. Buk Ubaang Sanda' Bidayuh Serian - English - Malay
iii. Buk Baang Piminyuu Bidayuh Biatah - English - Malay
iv Bup Paririkng Kata Salako - English – Malay

Rajah 8
Buku daftar kata empat variasi utama bahasa Bidayuh terbitan DBNA

Ejaan dalam *"Buk Bang Sinda Bidayuh Bau* – English – Malay" adalah seperti yang ditunjukkan dalam Rajah 9 di bawah.

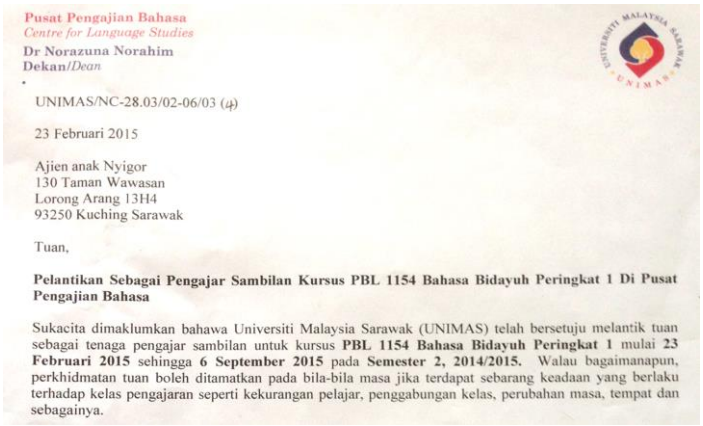
Rajah 9
Contoh ejaan dalam "Buk Bang Sinda Bidayuh Bau – English – Malay"

to'in oyap (Jg.) *n.phr.* appendix *apendiks* (Sg.: to'in moyap)
to'od *n.* stump *tunggul; puntung*
to'od-to'od *v.* stand motionless *terpukau*
to'ok *n.phr.* asthma *asma*
to'on *v.* to set a trap *memasang jerat*
to'on jaring *v.phr.* set up a net to catch animals *merentang jaring*
to'uh *n.* right side *kanan*
tobad *n.* a type of small grass with sharp edges *sejenis rumput kecil yang daunnya tajam*
tobah (Sg.) *n.* fermented food *jeruk makanan* (Jg.: kau')
tobah diyien (Sg.) *n.phr.* preserved durian *tempoyak* (Jg.: tipuyak)

Fasa ke-6 ialah penggunaan bahasa Bidayuh sebagai bahasa pengantar di peringkat prasekolah. Menurut Josak anak Siam, pada tahun 2007, DBNA telah membuka enam *Playschool* yang bahasa pengantarnya ialah bahasa Bidayuh. Para pelajarnya ialah kanak-kanak berusia tiga hingga empat tahun. Susulannya, pada tahun 2009, DBNA memperkenalkan "*MLE Kindergartens*" untuk pelajar berusia lima tahun. Semua mata pelajaran termasuk Matematik dan Sains diajar dalam bahasa Bidayuh kecuali Bahasa Melayu. Ejaan yang digunakan adalah yang disyorkan DBNA.

Fasa ke-7 ialah pembelajaran bahasa Bidayuh di peringkat universiti. Pada tahun 2015, Universiti Malaysia Sarawak (UNIMAS) menawarkan kursus Bahasa Borneo Peringkat 1 di mana pelajar boleh memilih untuk belajar sama ada bahasa Melayu Sarawak, Melanau, Iban atau Bidayuh. Ini merupakan suatu yang bersejarah dalam pendidikan formal bahasa Bidayuh, khususnya bahasa Bidayuh Bau. Mulai tahun 2015, bahasa Bidayuh Bau telah dipelajari di peringkat universiti. Sistem ejaan yang digunakan ialah yang dimurnikan oleh tenaga pengajarnya, Ajien anak Nyigor. Rajah 10 di bawah merupakan surat lantikan tenaga pengajar bahasa Bidayuh ditawarkan UNIMAS. Ia menjadi eviden sejarah bermulanya bahasa Bidayuh dipelajari secara formal.

Rajah 10
Keratan surat lantikan tenaga pengajar bahasa Bidayuh ditawarkan UNIMAS, eviden sejarah bermulanya bahasa Bidayuh dipelajari secara formal.



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Dekan/*Dean*

UNIMAS/NC-28.03/02-06/03 (4)

23 Februari 2015

Ajien anak Nyigor
130 Taman Wawasan
Lorong Arang 13H4
93250 Kuching Sarawak

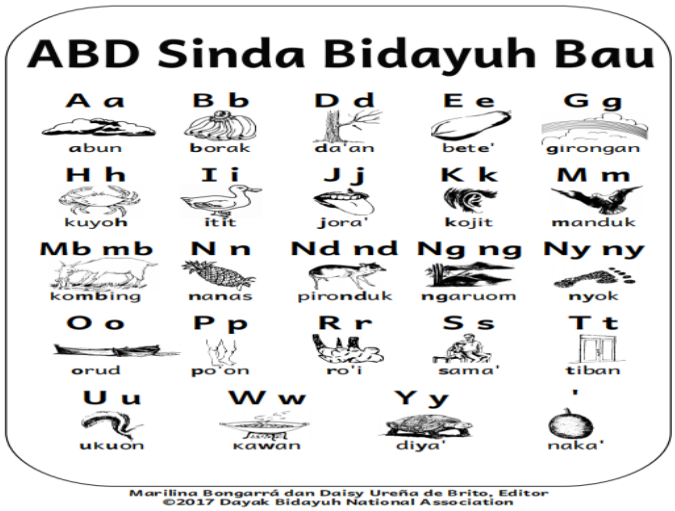
Tuan,

Pelantikan Sebagai Pengajar Sambilan Kursus PBL 1154 Bahasa Bidayuh Peringkat 1 Di Pusat Pengajian Bahasa

Sukacita dimaklumkan bahawa Universiti Malaysia Sarawak (UNIMAS) telah bersetuju melantik tuan sebagai tenaga pengajar sambilan untuk kursus **PBL 1154 Bahasa Bidayuh Peringkat 1** mulai **23 Februari 2015** sehingga **6 September 2015** pada **Semester 2, 2014/2015.** Walau bagaimanapun, perkhidmatan tuan boleh ditamatkan pada bila-bila masa jika terdapat sebarang keadaan yang berlaku terhadap kelas pengajaran seperti kekurangan pelajar, penggabungan kelas, perubahan masa, tempat dan sebagainya.

Fasa ke-8 ialah pelaksanaan projek Kurikulum Bahasa Etnik (KBE). Pihak DBNA dengan kerjasama *SIL* telah membina kurikulum untuk pendidikan bahasa Bidayuh di peringkat sekolah rendah. Pada tahun 2018, DBNA telah melaksanakan projek rintis mengajar Bahasa Bidayuh di peringkat sekolah rendah melibatkan pelajar Tahun 1 di enam buah sekolah rendah. Sistem ejaan yang digunakan ialah yang disyorkan DBNA. Rajah 11 di bawah menunjukkan contoh bahan bantu mengajar projek rintis Kurikulum Bahasa Etnik.

Rajah 11
Contoh bahan bantu mengajar projek rintis Kurikulum Bahasa Etnik



Fasa ke-9 ialah penggunaan bahasa Bidayuh dalam komunikasi di media sosial. Terdapat usaha generasi baharu dan lama untuk berbahasa Bidayuh dalam komunikasi melalui media sosial selari dengan perkembangan teknologi. Di antara *"facebook page"* yang ahlinya aktif berkomunikasi dalam bahasa Bidayuh ialah:

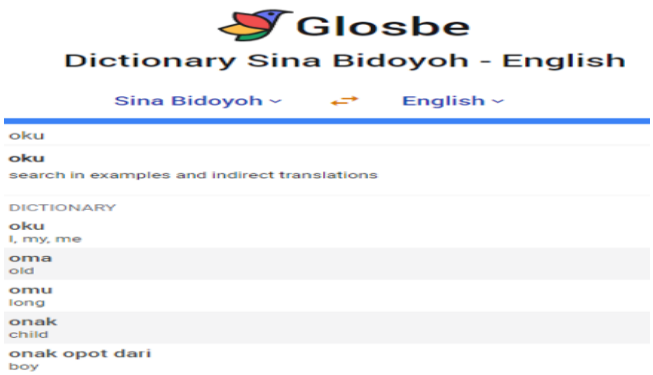
i. Belajar Bahasa Bidayuh di laman https://www.facebook.com/groups/3396807263712003
ii. Sinda Dayak Bidoyoh Bau di laman https://www.facebook.com/groups/bidayuhbau
iii. Akademi Sina Bidoyoh di laman https://www.facebook.com/groups/156387607775372

Walaupun ejaan yang digunakan dalam media sosial adalah pelbagai, namun yang lebih penting adalah amalan menggunakan bahasa ibunda untuk berkomunikasi selari dengan perubahan teknologi.

Fasa ke-10 ialah usaha berterusan mendokumentasi bahasa Bidayuh di medan maya. Walaupun terdapat pelbagai sistem ejaan digunakan, namun hal yang paling penting ialah wujudnya kesedaran dalam kalangan komuniti untuk mendokumentasi dan memelihara bahasa ibunda.

Sistem ejaan digunakan dalam entri kamus dalam talian, *Borneo Dictionary*, di laman web "https://borneodictionary.com/bidayuh-bau" adalah berbeza dengan yang digunakan dalam entri kamus dalam talian kendalian Glosbe, di laman "https://en.glosbe.com/mis_bid/en". Rajah 12 di bawah menunjukkan contoh entri kamus Sina Bidoyoh – English diurus selia oleh Glosbe.

Rajah 12
Contoh entri kamus Sina Bidoyoh – English diurus selia oleh Glosbe



Fasa yang ke-11 ialah usaha penerbitan daftar kata bahasa etnik oleh Dewan Bahasa dan Pustaka (DBP). Adalah menjadi hasrat DBP untuk memelihara semua bahasa etnik yang terdapat di Sarawak termasuk Bahasa Bidayuh Bau. Pihak DBP sedang dalam proses menerbitkan buku daftar kata Bahasa Bidayuh Bau. Sistem ejaan yang akan digunakan nanti belum ditentukan.

Fasa yang ke-12 ialah penggubalan Kurikulum Bahasa Etnik Bidayuh. Dengan matlamat bahasa Bidayuh akan diajar di sekolah mulai tahun 2025, pihak DBNA sedang giat menggubal kurikulum yang dikenali sebagai Kurikulum Bahasa Etnik Bidayuh (KBE Bidayuh). Untuk tujuan memohon kelulusan Kementerian Pelajaran Malaysia, kurikulum ini ditulis dalam bahasa Melayu dan akan diterjemah ke dalam variasi bahasa masing-masing. Pihak atas sedar bahawa bahasa etnik yang ditawarkan di sesebuah sekolah adalah bahasa etnik setempat. Dengan demikian, sekolah di daerah Bau boleh belajar bahasa Bidayuh Bau.

Kurikulum Bahasa Etnik Bidayuh Bau (KBE Bidayuh Bau) akan digubal dalam bahasa Bidayuh Bau berdasarkan kandungan kurikulum KBE Bidayuh. KBE Bidayuh Bau dan dokumen berkaitan yang lain akan dihasilkan dalam dua versi. Versi pertama menggunakan ejaan yang disyorkan DBNA. Versi kedua menggunakan sistem ejaan yang disarankan hasil dapatan kajian ini. Pihak atasan akan memilih variasi ejaan apabila tiba masanya.

Kesimpulannya, status bahasa Bidayuh pada masa ini ialah sebagai satu kursus elektif di peringkat universiti iaitu di UNIMAS. Bahasa Bidayuh ialah sebagai bahasa pengantar untuk penyampai ilmu di peringkat pra sekolah kelolaan DBNA. Manakala, di peringkat sekolah rendah, bahasa Bidayuh masih dalam peringkat mohon kelulusan untuk diajar di sekolah. Bahasa Bidayuh juga digunakan untuk menyebarkan maklumat melalui media massa dan media sosial. Status awal bahasa Bidayuh sebagai bahasa menyampai ilmu agama dan beribadat masih kekal. Dengan demikian, sangatlah penting untuk menentukan sistem ejaan yang lebih mantap.

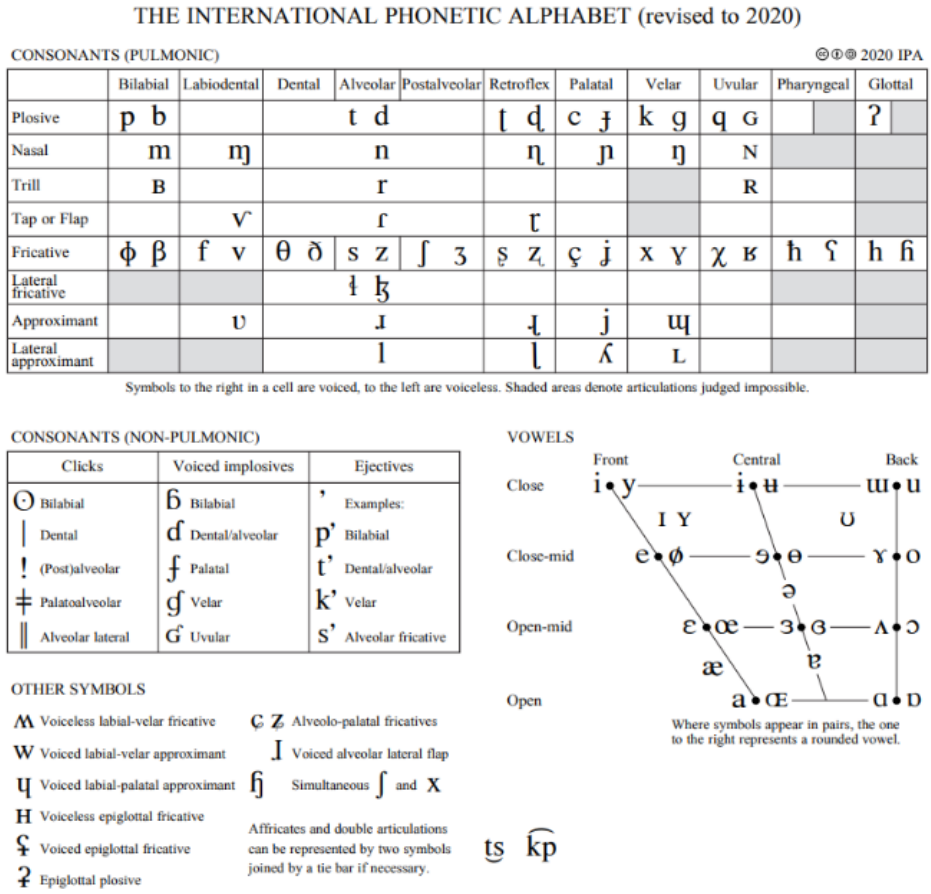
METODOLOGI KAJIAN

Kajian dijalankan menggunakan penyelidikan lapangan dan data dianalisis berdasarkan teori deskriptif linguistik seperti disarankan oleh Asmah Omar (2008). Data diperoleh dengan menyenaraikan perkataan didengar dalam perbualan harian dan disusuli dengan menulis transkripsi fonemik dan fonetiknya.

Data kajian juga diperolehi dari pangkalan data daftar kata bahasa Bidayuh yang telah dikumpul oleh Ajien Nyigor sejak tahun 1981. Daftar kata ini merupakan koleksi kosa kata yang didengar melalui perbualan harian. 138 perkataan daripada lebih 5000 disaring sebagai sampel kajian bagi tujuan kenal pasti binaan fonemnya. Senarai penuh perkataan tersebut ialah seperti dalam Lampiran 1

Dengan merujuk kepada *International Phonetic Alphabet (IPA)* versi 2020 seperti dalam Rajah 13 di bawah, semua fonem asli bahasa Bidayuh Bau akan disenaraikan dalam jadual kosong iaitu Jadual 2 dan Jadual 3.

Rajah 13
Keratan International Phonetic Alphabet versi tahun 2020



THE INTERNATIONAL PHONETIC ALPHABET (revised to 2020)

CONSONANTS (PULMONIC) — ©①⑨ 2020 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

Clicks	Voiced implosives	Ejectives
ʘ Bilabial	ɓ Bilabial	’ Examples:
ǀ Dental	ɗ Dental/alveolar	pʼ Bilabial
ǃ (Post)alveolar	ʄ Palatal	tʼ Dental/alveolar
ǂ Palatoalveolar	ɠ Velar	kʼ Velar
ǁ Alveolar lateral	ʛ Uvular	sʼ Alveolar fricative

OTHER SYMBOLS

ʍ Voiceless labial-velar fricative
w Voiced labial-velar approximant
ɥ Voiced labial-palatal approximant
ʜ Voiceless epiglottal fricative
ʢ Voiced epiglottal fricative
ʡ Epiglottal plosive

ɕ ʑ Alveolo-palatal fricatives
ɺ Voiced alveolar lateral flap
ʧ Simultaneous ʃ and x

Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.

t͡s k͡p

VOWELS

Where symbols appear in pairs, the one to the right represents a rounded vowel.

Jadual 2
Jadual kosong eviden kewujudan fonem vokal asli Bidayuh Bau

Fonem	Bunyi	Awal	Tengah	Akhir	Huruf
/a/	[a]				
/ă/	[ă]				
/ɛ/	[ɛ]				
/ĕ/	[ĕ]				
/ə/	[ə]				
/i/	[i]				
/ɪ/	[ɪ]				
/ɔ/	[ɔ]				
/ŏ/	[ŏ]				
/o/	[o]				
/u/	[u]				
/ŭ/	[ŭ]				

Jadual 3
Jadual kosong eviden kewujudan fonem konsonan asli Bidayuh Bau

Fonem	Bunyi	Awal	Tengah	Akhir	Huruf
/ b /	[b]				
/ d /	[d]				
/ g /	[g]				
/ h /	[h]				
/ j /	[j]				
/ k /	[k]				
/ l /	[l]				
/ m /	[m]				
/ n /	[n]				
/ ŋ /	[ŋ]				
/ ɲ /	[ɲ]				
/ p /	[p]				
/ r /	[r]				
/ s /	[s]				
/ t /	[t]				
/ w /	[w]				
/ j /	[j]				
/ ʔ /	[ʔ]				

DAPATAN DAN PERBINCANGAN

Hasil penelitian sebutan sampel kajian menemui bahawa bahasa Bidayuh Bau terbina daripada tiga puluh (30) fonem jati iaitu dua belas (12) fonem vokal dan sembilan belas (19) fonem konsonan.

Fonem vokal asli (jati) bahasa Bidayuh Bau

Terdapat dua belas fonem vokal jati bahasa Bidayuh Bau. Ianya terdiri daripada tujuh vokal teras iaitu /ɑ, ɛ, e, i, ɔ, o, u/ dan lima vokal terbitan proses nasalisasi iaitu /ɑ̃, ɛ̃, ĩ, ɔ̃, ũ/ seperti yang disenaraikan dalam Jadual 4.

Jadual 4
Eviden kewujudan fonem vokal asli bahasa Bidayuh Bau

Fonem	Bunyi	Awal	Tengah	Akhir
/ a /	[a]	ayuh (besar)	gah (khabar), nyam (pinjam), tumang (tumbang, air nila)	oma (lama)
/ ã /	[ã]	aa	naan (tahan), nyam (seperti, rasa), tumang (yatim)	nyaa (orang)
/ ɛ /	[ɛ]	eh (ganti nama)	neh (ialah, adalah), geh (juga)	bijure (bicara)
/ ɛ̃ /	[ɛ̃]		kirumieng (mengupas biji jagung)	
/ ə /	[ə]	eh! (hairan)	ageh! (sakitnya)	
/ i /	[i]	idoh (tidak)	sit (sedikit)	podi (padi)
/ ĩ /	[ĩ]		mirih (beli), pingirih (budaya kerjasama)	
/ ɔ /	[ɔ]	odi (pergi)	kod (batuk), koh (nanti), oran tongon (jalan lurus)	pimodo (hormat)
/ ɔ̃ /	[ɔ̃]	oo kiang eh (sebanyak ini)	ngiriyoh (melawan), tongon koyuh, (pokok)	nyoo (tetak), noo (lah)
/ o /	[o]	oi , oh, ooh	kod (panjang, *length*)	sino (emak)
/ u /	[u]	upan (umpan)	kusab (tidak endah), bitimun (bertimbun), nimun (kumpul, *pile up*)	sumu (sumbu lampu)
/ũ/	[ũ]	uu moti eh (sebesar ini)	bua timun (timun), mayuh (kurus), ni mun (serupa)	nguru, muu

Padanan fonem vokal dengan huruf rumi

Secara idealnya, satu fonem hendaklah dipadankan dengan satu huruf. Disarankan fonem vokal teras dan pasangan sengaunya dipadankan dengan huruf vokal yang sama. Ini bermakna huruf ‘a’ digunakan untuk mengeja dua fonem iaitu /a/ dan /ã/. Huruf “i” dipadankan dengan dua fonem iaitu /i/ dan /ĩ/. Huruf “u” dipadankan dengan dua fonem iaitu /u/ dan /ũ/. Sementara itu, huruf ‘e’ digunakan untuk mengeja tiga fonem iaitu /ɛ, ɛ̃, e/. Huruf ‘o’ digunakan untuk mengeja tiga fonem iaitu /ɔ, ɔ̃, o/. Padanan fonem vokal dengan hurufnya dirumuskan dalam Jadual 5 di bawah.

Jadual 5
Senarai dua belas fonem vokal asli bahasa Bidoyoh dan padanan hurufnya.

Fonem	Bunyi	Huruf	Awal	Tengah	Akhir
/ a /	[a]	**a**	ayuh	gah, nyam, tumang	oma
/ ã /	[ã]	**a**	aa	naan, nyam, tumang	nyaa
/ ɛ /	[ɛ]	**e**	eh	neh, geh	bijure
/ ɛ̃ /	[ɛ̃]	**e**		kirumieng	
/ ə /	[ə]	**e**	eh!	ageh!	
/ i /	[i]	**i**	idoh	sit	podi
/ ĩ /	[ĩ]	**i**		mirih	
/ ɔ /	[ɔ]	**o**	odi, oran	kod, koh, tongon	pimodo
/ ɔ̃ /	[ɔ̃]	**o**	oo kiang eh	ngiriyoh, tongon koyuh	nyoo, noo
/ o /	[o]	**o**	oi , oh, ooh	kod	sino
/ u /	[u]	**u**	upan	kusab, bitimun, nimun	sumu
/ ũ /	[ũ]	**u**	uu moti eh	bua timun, mayuh, ni mun	nguru, muu

Fonem konsonan asli (jati) bahasa Bidayuh Bau

Bahasa Bidayuh Bau terdiri daripada lapan belas fonem konsonan termasuk hentian glotis seperti disenaraikan dalam Jadual 6 di bawah.

Jadual 6
Eviden kewujudan fonem konsonan asli bahasa Bidayuh Bau

Fonem	Bunyi	Awal	Tengah	Akhir	Huruf
/ b /	[b]	bung (puncak)	tobah (pekasam)	abab (masakan tanpa minyak)	b
/ d /	[d]	doya (darah)	badog (tersumbat)	mad (bentang)	d
/ g /	[g]	gah (khabar)	gogah (sihat)	kopog (potong)	g
/ h /	[h]			mowah (bersiar-siar)	h
/ j /	[ǰ]	jaka (ketika)	jojak (buah-buahan)		j
/ k /	[k]	kapah (sebar)	kaki (ke mana)	karik (cari)	k
/ l /	[l]	lodieng (pisau dan parang tanpa hulu)	malas (malas)	ramal (sambal)	l
/ m /	[m]	moh (sudah)	pomos (hancur dalaman)	nuom (enam)	m
/ n /	[n]	nuok (minum)	konod (pekat)	naan (tahan)	n
/ ŋ /	[ŋ]	ngorok (leka)	singot (sengat), ngangngik (tidak stabil, senget)	tungang (berupaya)	ng
/ ɲ /	[ɲ]	nyam (pinjam)	ponyap (kemas)		ny
/ p /	[p]	poh (tumbuk)	dipoh (ular)	bisakap (menjerit)	p
/ r /	[r]	rasot (langsat)	paruo (haruan)	damar (damar)	r
/ s /	[s]	sus (pergilah)	sasak (reban)	kos (berpaling)	s
/ t /	[t]	tung (nyalakan)	patang (pantang)	komut (lupa)	t
/ w /	[w]	watinoh (begitu)	awon (hairan)	boow (lah, pula)	w
/ j /	[j]	yuok (ulas)	oyung (monyet)		y
/ ʔ /	[ʔ]		piin (air), koih (kami)	sama (bapa), mamie (basuh)	

Padanan fonem konsonan dengan huruf rumi

Disarankan tiada simbol atau huruf digunakan untuk menanda hentian glotis. Justeru, tujuh belas fonem yang lain iaitu /b, d, g, ǰ, h, k, l, m, n, ŋ, ɲ, p, r, s, t, w, j/ masing-masing dipadankan dengan huruf b,d,g,j,k,l,m,n,ng,ny,p,r,s,t,w,y. Padanan fonem konsonan dengan hurufnya dirumuskan dalam Jadual 7 di bawah.

Jadual 7
Senarai lapan belas fonem konsonan jati dan padanan hurufnya

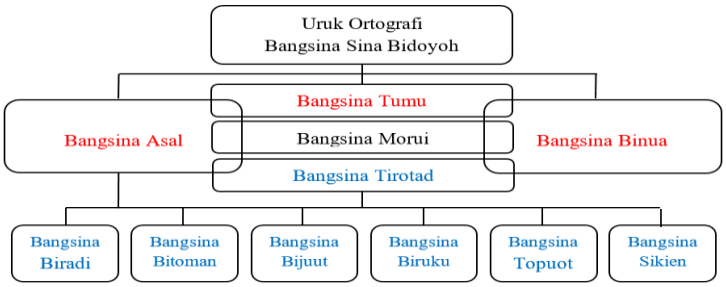
Fonem	Bunyi	Huruf	Awal	Tengah	Akhir
/ b /	[b]	**b**	bung	tobah	abab
/ d /	[d]	**d**	doya	badog	mad
/ g /	[g]	**g**	gah	gogah	kopog
/ h /	[h]	**h**			mowah
/ ǰ /	[ǰ]	**j**	jaka	jojak	
/ k /	[k]	**k**	kapah	kaki	karik
/ l /	[l]	**l**	lodieng	malas	samal
/ m /	[m]	**m**	moh	pomos	nuom
/ n /	[n]	**n**	nuok	konod	naan
/ ŋ /	[ŋ]	**ng**	ngorok	singot, ngangngik	tungang
/ ɲ /	[ɲ]	**ny**	nyam	ponyap	
/ p /	[p]	**p**	poh	dipoh	bisakap
/ r /	[r]	**r**	rasot	paruo	damar
/ s /	[s]	**s**	sus	sasak	kos
/ t /	[t]	**t**	tung	patang	komut
/ w/	[w]	**w**	watinoh	awon	boow
/ j /	[j]	**y**	yuok	oyung	
/ ʔ /	[ʔ]			piin, koih	sama, mamie, sidudu

Penetapan huruf bagi ejaan fonem asli bahasa Bidayuh Bau

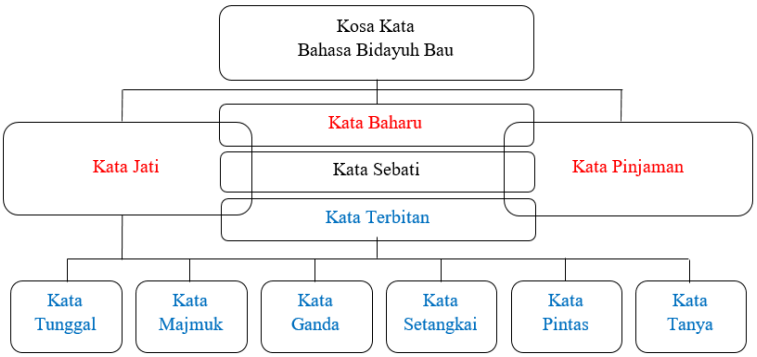
Penetapan huruf untuk mengeja fonem asli bahasa Bidayuh merupakan langkah permulaan yang penting dalam membina sistem ejaannya. Selain itu, elemen pengimbuhan, penggandaan dan peminjaman kata juga penting diambil kira dalam menentukan sistem ejaan.

Bagi memudahkan penerangan sistem ejaan, kosa kata bahasa Bidayuh boleh dibahagikan kepada tiga kumpulan ortografi iaitu Kata Jati (*Bangsina Asal*), Kata Pinjaman (*Bangsina Binua*) dan Kata Baharu (*Bangsina Tumu*) (Ajien Nyigor, 2000). Perkara ini ditunjukkan dalam Rajah 14 dan Rajah 15 di bawah.

Rajah 14
Hubung kait kosa kata Sina Bidoyoh bagi tujuan ortografi



Rajah 15
Hubung kait kosa kata bahasa Bidayuh Bau bagi tujuan ortografi



Semua perkataan yang telah mantap penggunaannya digolongkan dalam kumpulan Kata Jati. Contohnya *sino* (ibu), *oniwat* (kenapa), *pirai* (lapar), *tiku* (kepunyaan saya), *busuoh-konyah* (sangat kenyang) dan *songot* (hitam). Kata Jati terdiri daripada tujuh kumpulan iaitu Kata Tunggal, Kata Majmuk, Kata Ganda, Kata Terbitan, Kata Setangkai, Kata Pintas dan Kata Tanya.

Semua perkataan bahasa asing yang dipinjam, diubahsuai dan diserap dengan sebutan bahasa Bidayuh termasuk dalam kategori Kata Pinjaman. Contohnya *hospital* (hospital), *bisikal* (basikal), *kaki ayam* (kaki ayam), *cincai* (sambil lewa), *ngabang* (mengunjungi seseorang) dan *tirimakaseh* (terima kasih). Sumber kata pinjaman kebanyakannya ialah dari bahasa Inggeris, Melayu, Cina dan Iban.

Sejajar dengan sifatnya yang dinamik, kosa kata bahasa Bidayuh Bau kian bertambah. Para penuturnya boleh meminjam dari bahasa lain atau mencipta istilah baharu. Perkataan yang dicipta ini dikategorikan dalam kumpulan Kata Baharu. Contoh, *kurami* (terima kasih). Dicadangkan kata pinjaman boleh dieja ikut ejaan asalnya atau diubahsuai misalnya *bank*, *hospital*, *komputer* dan *henfon*.

Kata Sebati terbit daripada kata pinjaman dan suatu produk. Perkataan sirait berasal dari ‘torch light’ yang sebutannya telah dilentur menjadi seperti gaya sebutan dalam bahasa Bidayuh. Begitu juga dengan perkataan *gohet* yang merupakan

lenturan sebutan frasa ‘go ahead’. Perkataan *sunsun* pula merupakan lenturan kata pinjaman dari bahasa Cina. Perkataan *sadin* berasal dari label makanan dalam tin iaitu ‘sardin’. Makna perkataan sadin dalam Bidayuh diperluaskan lagu iaitu merangkumi apa-apa sahaja makanan dalam tin, tidak terhad kepada ikan sadin yang ditinkan. Perkataan *omo* pula diambil sempena jenama produk mencuci, ‘omo’ dan makna perkataan omo ialah serbuk pencuci. Tentu dapat diagak dari mana asalnya dan apa makna perkataan *kolget* yang merujuk kepada mana-mana jenama ubat gigi. Perkataan *kolget* asalnya ialah jenama ‘colgate’. Dicadangkan perkataan yang telah sebati dengan nahu bahasa Bidayuh, dieja ikut sebutan Bidayuhnya.

Perkataan dalam kumpulan Kata Jati, Kata Pinjaman, Kata Baharu dan Kata Sebati dapat menerima awalan tertentu dan membentuk perkataan baharu. Perkataan baharu ini dikategorikan sebagai Kata Terbitan. Misalnya, *pinguman* (makanan) terbit daripada kata dasar *man* (makan) setelah menerima awalan ‘ping’.

Dicadangkan kata jati dieja ikut sebutannya sesuai dengan padanan fonem dan huruf yang disarankan dalam dapatan kajian ini. Contoh penggunaan sistem ejaan ini dapat diperhatikan dalam penulisan buku “*Literasi Sina Bidoyoh RAMI BIPATUN*”. Buku ini mengandungi lima puluh pantun dan tiga lirik lagu. Ejaan alternatif setiap pantun juga disediakan untuk memudahkan perbandingan. Buku seperti Rajah 16 di bawah dapat diakses di saluran Youtube https://youtu.be/KxgpXmY-j_o?si=sNBXEtsk5BczddAb dan laman *https://anyflip.com/mgyns/hihu.* Bagi mendengar audio teks, pendengar boleh mengimbas QR-code diberi.

Rajah 16
Contoh kandungan buku “Literasi Sina Bidoyoh RAMI BIPATUN”

IMPLIKASI

Sistem ejaan ini mencadangkan kata asli bahasa Bidayuh Bau dieja selaras dengan sebutannya menggunakan padanan fonem dan huruf disarankan dalam Jadual 5 dan Jadual 7. Ini bermakna tiada simbol tertentu digunakan untuk menandakan hentian glotis. Ketetapan ini selaras dengan strategi bahasa Melayu dan bahasa Iban yang tidak lagi menggunakan sebarang tanda sebagai indikator hentian glotis. Strategi yang sama digunakan untuk menghadapi isu kesengauan iaitu tiada simbol atau huruf tertentu digunakan sebagai indikator kesengauan. Ketetapan ini ialah untuk keselarasan dengan bahasa lain dan untuk meningkatkan konsistensi ejaan walau pun disedari akan timbul beberapa implikasi. Di antara implikasinya ialah wujudnya

homograf, homonim, ketidakpastian wujudnya kesengauan dan ketidakpastian wujudnya hentian glotis.

Implikasi berkaitan penggunaan huruf yang sama untuk mewakili lebih daripada satu fonem

Antara implikasi penggunaan huruf yang sama untuk lebih daripada satu fonem ialah akan ada perkataan yang homograf dan homonim. Hal ini demikian kerana satu huruf vokal dipadankan dengan lebih daripada satu fonem. Misalnya huruf 'a' digunakan untuk mengeja bunyi vokal [ɑ] dan bunyi sengau [ɑ̃]. Huruf 'o' digunakan untuk mengeja vokal [ɔ, ɔ̃, o].
Homograf merujuk pada perkataan yang mempunyai ejaan yang sama tetapi berlainan sebutan. Dalam ayat 1a di bawah, ujaran *tongon* (lurus) ialah [tɔngɔn], manakala dalam ayat 1b, ujaran *tongon* (pokok) ialah [tɔngɔ̃n].

1a. Ponu *tongon* [tɔngɔn], mokuo inoh, kos touh.
Jalan lurus kemudian belok kanan.

1b. Ma ngapoh nyikoh *tongon* [tɔngɔ̃n] rimutan, goriep dopeneh.
Hati-hati memanjat pokok rambutan kerana dahannya mudah patah.

Perkataan *nyam* merupakan homograf dan homonim. Perkataan *nyam* [ɲɑm] yang bermaksud 'minta tolong' homograf dengan *nyam* [ɲɑ̃m] yang bermaksud 'di tempat awak' seperti yang tertera dalam ayat 2a dan 2b.

2a. Komo oku *nyam* [ɲɑm] muu, raan mu odi neh?
Jika saya pinjam (minta tolong) awak, sudikah awak pergi?

2b. Komo oku *nyam* [ɲɑ̃m] muu, raan ku odi neh.
Jika saya adalah kamu, mahu saya pergi.

Perkataan *nyam* [ɲɑm] juga mempunyai elemen homonim. Homonim adalah perkataan yang sama sebutan tetapi mempunyai makna yang berbeza. Dalam ayat 3a, makna *nyam* [ɲɑm] ialah 'pinjam', manakala dalam ayat 3b, makna *nyam* [ɲɑm] ialah 'mohon pertolongan'.

3a. Soon ku *nyam* [ɲɑm] sakul mu neh?
Boleh saya pinjam cangkul awak?

3b. Oku *nyam* [ɲɑm] muu odi mit sakul saan ku dio?
Boleh saya pinjam (minta tolong) awak pergi ambil cangkul untuk saya?

Perkataan *nyam* [ɲɑ̃m] juga mempunyai elemen homonim. Dalam ayat 4a, makna *nyam* [ɲɑ̃m] ialah 'rasa'. Dalam ayat 4b, *nyam* [ɲɑ̃m] merupakan nama bagi sejenis pokok. Dalam ayat 4c, makna *nyam* [ɲɑ̃m] ialah 'di tempat awak'.

4a. Sidi *nyam* [ɲɑ̃m] pinguman itih neh.
Sedap rasa makanan ini..

4b. Itih tongon *nyam* [ɲɑ̃m].

Ini ialah pokok *nyam*.

4c. Komo oku *nyam* [ɲãm] muu, tirima ku sija.
Jika saya ialah awak, pasti saya terima.

Namun demikian, tidak banyak perkataan yang seunik perkataan *nyam*. Homograf dan homonim melibatkan *nyam* adalah implikasi daripada unsur kesengauan.

Implikasi berkaitan ketiadaan indikator hentian glotis

Implikasi kedua adalah berikutan ketiadaan huruf atau simbol tertentu untuk menandakan hentian glotis. Dalam bahasa Melayu, perkataan 'taat' juga mengandungi entiti hentian glotis. Melalui kebiasaan, 'taat' [tɑʔɑt] diujar dengan betul walaupun tanpa huruf atau simbol khas untuk hentian glotis. Dalam bahasa Bidayuh, perkataan *sama* (ayah), *sino* (ibu), *sikie* (abang dan kakak), *sudi* (adik), *raan* (mahu) dan *puan* (tahu) tetap disebut dengan betul walaupun tanpa indikator hentian glotis.

Dalam situasi homograf, konteks ayat memberi panduan perkataan mana yang dimaksudkan. Misalnya perkataan *naan*. Konteks ayat memberi panduan makna sama ada [nɑʔɑn] atau [nɑɑn]. Dalam ayat 5a *naan* [nɑʔɑn] merujuk kepada 'bilangan orang', manakala dalam ayat 5b *naan* [nɑɑn] ialah 'tahan'.

5a. Kudu *naan* [nɑʔɑn] nyaa de dapod sua? Simoong *naan* [nɑʔɑn] sija.
Berapa orang dapat turut serta? Sepuluh orang sahaja.

5b. Kudan-kanyam eh, susah bait sonang, *naan* [nɑɑn]sija.
Walau apa pun, susah atau senang, *tahan* saja.

Contoh homograf yang lain ialah *paan*, *suan* dan *baat*.

6a. Babai ku *paan* [pɑɑn] makup di tun mija.
Datuk saya *menghempas* mangkuk di atas meja.

6b. Sumuk tajoh *paan* [nɑʔɑn] jumuo.
Nenek mula *menganyam* tambok.

7a. Babai *suan* [suɑn] bua borak di sopa.
Datuk *menyembunyikan* buah pisang di luar.

7b. Babai *suan* [suʔɑn] tongon diyien.
Datuk *mengupas kulit* pokok durian itu.

8a. Punan buluk inoh *baat* [bɑʔɑt] tana koih.
Rumpun buluh itu *sempadan* tanah kami.

8b. Batuh inoh *baat* [bɑʔɑt].
Batu itu *berat*.

Walaupun akan terdapat homograf dan homonim, diyakini sistem ejaan ini lebih mesra pengguna dan berpotensi mempunyai daya konsisten yang tinggi.

KESIMPULAN

Kajian ini merupakan usaha bersama ke arah kelestarian bahasa Bidayuh. Sistem ejaan merupakan suatu yang dinamik. Justeru, mana-mana sistem ejaan adalah betul mengikut prinsip ejaannya asalkan sistem ejaan dipilih digunakan secara konsisten. Semoga dengan pemantapan aspek ejaan bahasa Bidayuh akan memudahkan lagi usaha menuju cita-cita bahasa Bidayuh dipelajari secara formal di sekolah.

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LAMPIRAN 1

Senarai perkataan yang disaring daripada lebih 5000 sebagai sampel kajian.

1	aa	kata seruan ketika terkejut, hairan
2	abab	masakan tanpa minyak
3	adon	nama
4	ageh	kata seruan menyatakan betapa sakitnya
5	awon	hairan
6	ayuh	besar
7	badog	tersumbat
8	bijure	berkunjung ke suatu tempat
9	bisakap	menjerit
10	bitaboi	tergantung
11	bitiyie	mengandung
12	boos	tidur
13	boow	lah
14	boow	pula
15	bung	puncak
16	buo	burung hantu
17	buok	rambut
18	damar	damar
19	dayung	wanita
20	dipoh	ular
21	doya	darah
22	eh	ganti nama diri ketiga
23	eh!	hairan
24	gah	khabar
25	geh	juga
26	gogah	sihat
27	gogah	sihat
28	guru	duduk
29	guru	guru
30	idoh	tidak, bukan
31	ikien	ikan
32	jaka	ketika
33	jojak	buah-buahan
34	jora	susah
35	jora	lidah
36	jorak	rusa
37	jugan	hulur
38	kaki	ke mana
39	kapah	sebar
40	karik	cari
41	kirumieng	mengupas biji jagung
42	kod	bunyi batuk
43	kod	panjang, *length*
44	koh	akibatnya nanti
45	koih	kami
46	komang	kembang

47	komang	roh para pahlawan
48	komut	lupa
49	konod	pekat
50	kopog	potong
51	kos	berpaling
52	kusab	tidak endah
53	lodieng	pisau atau parang tanpa hulu
54	mad	bentang
55	maka	langgar
56	malas	malas
57	mamie	basuh
58	mayuh	kurus
59	mirih	beli
60	mogan	panggil
61	moh	sudah
62	mowah	berkunjung, bersiar-siar
63	muu	kamu
64	naan	kata bilangan bagi orang
65	naan	tahan
66	neh	ialah, adalah
67	ngangngik	ngangngik (tidak stabil, senget
68	ngiriyoh	melawan
69	ngorok	leka
70	nguru	mengiring
71	ni mun	serupa
72	nimun	longgok
73	noo	tentulah
74	nuok	minum
75	nuom	enam
76	nyaa	orang
77	nyaa	kerana
78	nyam	pinjam
79	nyam	rasakan
80	nyam	seperti
81	nyoo	tetak berniat membunuh
82	odi	pergi
83	oh	oh
84	oi	kata panggil dan sahut panggilan
85	oma	lama
86	oma	walaupun
87	oo kiang eh	sebanyak ini
88	ooh	ooh
89	oyung	monyet
90	pah	upah
91	paruo	haruan
92	patang	pantang
93	piin	air
94	pimodo	hormat
95	pingirih	budaya kerjasama
96	pirungang	nyamuk

97	podi	padi
98	poh	tumbuk sesuatu di dalam lesung
99	pomos	hancur dalaman
100	ponyap	kemas
101	poya	lapang, tidak sibuk
102	poyayoi	sejenis objek mainan
103	rasot	langsat
104	ringieng	mahir memanjat
105	ringieng	kilauan
106	sama	ayah
107	samal	sambal
108	sasak	reban
109	singot	sengat,
110	sino	ibu
111	sinok	dekat
112	sit	edikit
113	sit	kecil
114	sumu	umbu lampu
115	sus	pergilah
116	tana	tanah, *land*
117	tana	tanah, *soil*
118	tana	tarian, *dance*
119	tana	lantai, *floor*
120	timun	timun
121	timun	longgokan
122	tirukum	sepakat
123	tobah	pekasam
124	tongon	lurus
125	tongon koyuh	pokok
126	tumang	tumbang
127	tumang	air nila
128	tumang	yatim
129	tung	dimiliki oleh
130	tung	nyalakan
131	tungang	terdaya, berupaya
132	tungang-tungang eh	terdaya pun, berupaya pun
133	tungang-tungang eh	posisi membongkok
134	ukuon	ekor
135	upan	umpan
136	uu moti eh	besarnya sebesar ini
137	watinoh	begitu
138	yuok	ulas

UTILISING GAME-BASED LEARNING IN SPEAKING LESSONS TO ENHANCE ESL SECONDARY SCHOOL LEARNERS' VOCABULARY, MOTIVATION AND LEARNING ENVIRONMENT

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ABSTRACT

With the implementation of Common European Framework of Reference for Languages (CEFR) in Malaysia, the Ministry of Education aims for secondary school learners to attain a minimum level of B1 in their English language. However, as observed, school learners are often reported to exhibit poor speech production. A preliminary observation conducted during speaking practices revealed that poor vocabulary acquisition (and other linguistic aspects), speaking anxiety and dull learning environments contribute greatly to the problems that language learners face in an ESL classroom. Employing the action research method, this study aims to tackle the aforementioned challenges using game-based learning (GBL). The participants of this research comprised of 20 upper secondary school learners who were in Form 4. Data were collected through questionnaire (closed-ended and open-ended) and group reflection to gain insights on how GBL could facilitate learners in improving their speech production. The results of the study showed learners' positive perspectives towards the use of GBL as it not only enriches learners' vocabulary, but it also boosts their self-confidence as well as improves classroom learning environment. Hence, GBL might be a great teaching tool which can cater learners' needs in honing their speaking.

Keywords: speaking, motivation, vocabulary, game-based learning, learning environment

ABSTRAK

Dalam pelaksanaan Common European Framework of Reference for Languages (CEFR) di Malaysia, matlamat Kementerian Pendidikan Malaysia (KPM) untuk murid sekolah menengah adalah untuk mencapai tahap minimum B1 dalam Bahasa Inggeris mereka. Walau bagaimanapun, hasil pemerhatian mendapati bahawa pertuturan pelajar sekolah masih lemah. Kajian awal yang dilaksanakan untuk mengenalpasti masalah murid dalam pembelajaran bertutur menunjukkan bahawa murid menghadapi cabaran dari aspek linguistik (kosa kata yang lemah), kegelisahan ketika berucap dan suasana pembelajaran bertutur yang membosankan. Untuk mengatasi masalah yang dihadapi, kajian tindakan telah dilakukan bertujuan untuk mengenalpasti bagaimana pembelajaran berasaskan permainan boleh dijadikan satu pendekatan yang berpotensi untuk meningkatkan kemahiran bertutur pelajar. Peserta penyelidikan ini terdiri daripada 20 orang murid sekolah menengah atas yang berada di Tingkatan 4. Data diperoleh menggunakan kaedah gabungan melalui penggunaan soal selidik (soalan berbentuk terbuka dan tertutup) dan refleksi kumpulan untuk mendapatkan pandangan bagaimana pendekatan ini membantu meningkatkan kemahiran bertutur mereka. Hasil kajian menunjukkan pelajar berpandangan positif terhadap pendekatan ini kerana ia bukan sahaja meningkatkan perbendaharaan kata mereka, tetapi juga meningkatkan keyakinan diri mereka dan suasana persekitaran pembelajaran dalam kelas. Oleh itu, pendekatan ini mungkin boleh dijadikan sebagai alat bantu mengajar yang

boleh memenuhi keperluan murid dalam mengasah kemahiran bertutur Bahasa Inggeris mereka yang amat penting dalam abad ke-21 ini.
Kata kunci: *bertutur, motivasi, kosa kata, pembelajaran berasaskan permainan, suasana pembelajaran*

INTRODUCTION

The capability to converse in English at the most basic level is no longer sufficient as most jobs demand employees to be competent in the language especially in jobs which require oral communication such as customer service and marketing (Ting et al., 2017). Such necessity drives the Ministry of Education Malaysia to introduce Common European Framework of Reference for Languages (CEFR) in Malaysian English language education as it is deemed a suitable benchmark for English standards (Zuraidah & Mardziah, 2019). Learners are expected to attain at least a B1 or B2 level upon leaving secondary schools. Within these levels, they are expected to possess the ability to:

i. understand the main ideas of complex text on both concrete and abstract topics, including technical discussion in his/her field of specialization,
ii. interact with a degree of fluency of spontaneity that makes regular interaction with native speakers quite possible without strain for either part, and
iii. produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.

(Kementerian Pelajaran Malaysia, 2021).

However, the aim seems far-fetched and may be beyond attainment for the learners in my school as majority of the ESL learners' speaking performance is not on par with what is being targeted based on learners' English result and my observation.

Conducting speaking class is new to me as it was not emphasized in the previous curriculum. Despite attending the CEFR Cascading Course organised by English Language Teaching Center (ELTC), I still had difficulties conducting speaking lessons as the course content mainly touches on providing equal speaking opportunity for learners and not much emphasis on the speech clarity. Hence, such dearth of teaching resources is a big loophole as according to Nadesan and Md Shah (2020), to ensure successful speaking lessons, teachers need to be guided on how to embed activities in speaking class to offer greater opportunities for learners to interact with peers and teachers.

Hence, there is a need to find a plausible solution not only to improve learners' speech production but also to improve my own speaking lessons, particularly in my own specific classroom context so that learning can be optimized. For this reason, conducting Classroom Action Research (CAR) would be the most suitable approach to achieve the purpose of the study.

PROBLEM STATEMENT

According to Kaur (2022), challenges faced by learners during speaking class need to be identified. This is because teacher's pedagogical principles may not always coincide with learners' learning environment (Kashinathan & Aziz, 2021). For this reason, a preliminary study related to learners' problems during speaking practice was conducted.

The preliminary study shows that learners were weak in terms of linguistic aspect especially vocabulary. As seen in learners' speaking results, majority fell in the range of Band 2 to Band 4 in vocabulary aspect. Based on the speaking assessment scales provided by Kementerian Pelajaran Malaysia (2021), this indicates that learners:

i. can use a range of appropriate vocabulary to talk about everyday situations and familiar topics, and
ii. can convey relevant meaning but may have errors in vocabulary choice.

Such ability, however, is still far from KPM's target that is to produce learners who are capable of using a wide range of appropriate and more advanced vocabulary to deliver their complex and abstract ideas in their speech.

Besides that, most learners were found to possess low self-esteem when speaking English as they lacked self-confidence and were fearful of making mistakes. Based on my classroom observation, there is a propensity for learners to slow down their speech when I approached and only continue speaking when I left their sides. This situation, according to Palupi (2021), may inhibit learners to speak which might harm their oral skills later. Thus, there is a need to create a joyful learning environment where learners can feel relaxed to communicate orally.

Lastly, learners seemed to be demotivated during the speaking lesson as the majority felt that the lesson was quite monotonous although learning content was within learners' capability. I tried to apply the methods put forward by ELTC in speaking class, but the learning environment has not improved, and my students still viewed the lesson as dull. According to Hyun et al. (2017), such a phenomenon may have negative impacts on learners as active speaking classroom has positive correlation to learners' learning satisfaction which help greatly with one's learning process.

Kashinathan and Aziz (2021) suggested that classrooms should be interactive and learner-centered so as to motivate and inspire learners to speak in English. Past studies also revealed that to compensate learners' weaknesses in speaking, one of the alternatives is to introduce game-based learning (GBL) as it has been found to be effective in improving learners' competency and motivation through fun learning experience (Dewi et al., 2017; Wong & Md Yunus, 2021). Considering the positive impact of the implementation of GBL, I was motivated to conduct a CAR on the implementation of GBL in speaking lesson to improve my learners' speech production.

OBJECTIVES OF STUDY

General objective

The purpose of this study is to improve my speaking lessons using GBL.

Specific Objectives

The research aims to:
a. examine if GBL improves my learners' vocabulary in speaking.
b. examine if GBL improves my learners' confidence in speaking.
c. examine if GBL improves my classroom learning environment.

Research Question

The research questions for this action research are as follow:
a. How does GBL help my learners to improve their vocabulary in speaking?
b. How does GBL increase my learners' self-confidence in speaking?
c. How does GBL improve the learning environment in my speaking class?

LITERATURE REVIEW

GBL can be defined as a learning tool where games are utilized to achieve specific learning goals. All the game elements such as rules and reward systems are played in a non-threatening and relaxing environment (Plass et al., 2015; Plass et al., 2020). This learning environment, according to Zulfizar and

Laylo (2020), offers a great alternative to develop speech production in classroom learning which requires active discovery, analysis, interpretation, problem-solving, memory and physical activity and extensive cognitive processing.

Ng et al. (2021) states that utilizing GBL as a learning tool is invaluable to enhance learners' speaking ability in the long run. Based on a study conducted by Heri and Haerazi (2021), not only games allow learners to communicate in the target language spontaneously, but it also serves as a platform for imitation of speech to occur especially in expressing their opinions since they are highly engaged in social interaction which eventually influence them to produce fluent speech. The opportunity to collaborate with competent learners during GBL also facilitates weak learners in constructing their knowledge (Darus & Endang, 2022). The interactive and experiential learning activity results in effective learning as meaningful and memorable learning experience is created (Balakrishna, 2023).

According to Diana and Renda (2022), the use of GBL can improve learning atmosphere as it produces a more relaxing learning environment that allows learners to practice English without anxiety. When a stress-free ambiance occurs, learners will have good participatory attitudes which spurs them to reduce hesitation, and fear of making mistakes and forget their shyness as they express their ideas naturally since GBL cultivates cooperative learning among learners (Heri & Haerazi, 2021; Wong & Md Yunus, 2022).

Another benefit of GBL is its ability to offer a stimulating and motivating learning environment, making uninteresting materials more exciting which inadvertently increases learners' engagement as compared to traditional classroom learning (Alfi et al., 2021; Hafeez, 2021). With such learning enjoyment, it improves learning effectiveness and satisfaction as learners are exposed to different speaking practices (Wong & Md Yunus, 2022; Alfi et al., 2021). This drives learners to value and appreciate the change in teachers' teaching styles as they hardly vary in secondary education (Hart et al., 2020).

METHODOLOGY

The type of research used in this study was classroom action research as it was intended to improve my learner's common speaking problems in the classroom. The participants for this research were Form 4 learners in one of the secondary schools, situated in the outskirt of Bintulu town in Sarawak, Malaysia. There were 13 females and 7 males. The participants' English proficiency was moderate, ranging from Grade E to Grade B based on their first-term examination result. I have only carried out one cycle in this action research which embodied four steps such as plan, action, observation and reflection as formulated by Kemmis and McTaggart. The employed instrument for the action research was a questionnaire (close-ended and open-ended) and a group reflection.

Action Plan

Planning

The researcher designed three different speaking games whereby the contents of the games were parallel to textbooks learning. According to Heri and Haerazi (2021), using various speaking games leads to a better outcome as it helps students to rethink and repeat English sentences in different manners.

Acting & observing

The intervention period for this research study spanned the course of 3 lessons which were carried out every fortnight. Each game was played within the duration of 20 to 30 minutes depending on the time allocated for the lesson on that day. Table 1 shows the details of the intervention conducted in the class.

Table 1
Schedule for Intervention

Date	Conducted game	Learning content	Type of games
12 September 2022	Touch and go	Chapter 3: Buy it! Topic: Characteristics of an employer Focus: Describing	Group work
26 September 2022	Roll and Speak!	Chapter 4: Being a teen Topic: Educational tools Focus: Advantages and disadvantages	Individual
10 October 2022	The Chitter-chatter board	Chapter 5: Globetrotting Topic: Transportation Focus: Describing	Individual

Prior to the game, learners were given some time to discuss the content points with their group members and were given some time to practise their speech on their own. The fundamental principle of the game is drilling to improve their speech production and confidence. During the games, learners would be given new vocabulary which they were required to use in their speech.

On the last day of the intervention, a group reflection was conducted, and a questionnaire was given to each participant to seek their perspectives on GBL in the speaking lessons. The questionnaire also consisted of open-ended questions.

Reflecting

All the data collected were analysed to answer the research questions.

DATA COLLECTION AND ANALYSIS

Findings of the research are discussed with respect to the research questions posed in the study.

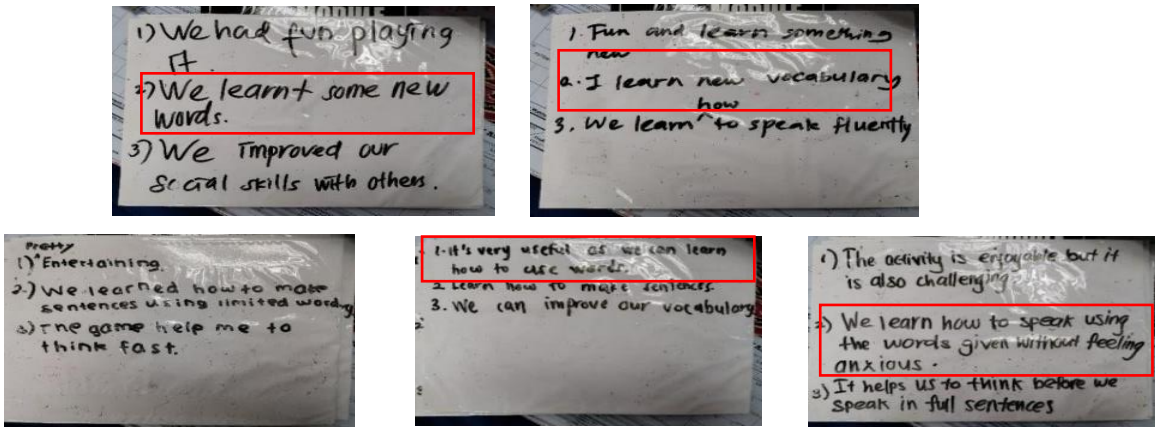
Research Question 1: How does GBL help learners to improve their vocabulary in speaking?

The findings indicated that GBL has some positive implications in enriching learners' vocabulary. Table 2 shows the participants' responses in the questionnaire on the aspect of linguistics. Majority of the learners agreed that the use of GBL helped to build their vocabulary (M=4.25) and other linguistic aspects. This is also reflected in the learners' group reflection as can be seen in Figure 1 when four out of five groups mentioned vocabulary learning as their learning outcome. Based on responses garnered, vocabulary enhancement happened when participants would query the meaning of unfamiliar words used by their friends when playing the games (Participant K). Besides that, five participants mentioned that they gained new input since the games required them to use given words or phrases in their speech, and it increased their awareness on the appropriate choice of words to be used.

Table 2
Participants' Responses on the Intervention in the Aspect of Linguistics

Item	Mean
The speaking games help to build my vocabulary in speaking.	4.25
The speaking games help to increase my grammar knowledge.	4.15
I learn about pronunciation in the speaking games.	4.40

Figure 1
Group Reflection after the Implementation of the Intervention on the Last Session



Furthermore, vocabulary learning also occurs due to cooperative element in the game. Group members, as mentioned by Participant B, would guide and inform them on how to use the words correctly during the game. This encouraged them to try their best to use proper words in their speech *(Participant S),* which eased understanding and memorization of new words *(Participant C).*

Research Question 2: How does GBL increase learners' self-confidence in speaking?

Table 3 shows the participants' responses with regards to the aspect of self-esteem. Based on Table 3, majority of the learners portrayed high confidence in speaking (*M*=4.40) as GBL reduced their fear of making mistakes (*M*=3.80) and eased them to get help from friends (*M*=4.60). According to Participant P, she spoke more confidently as she emulated her friends' behaviour who continued speaking despite making errors in their speech. It is also revealed that some learners were more "comfortable talking to their friends" instead of their English teacher which boosted their confidence in speech production *(Participant Q).*

Table 3
Participants' Responses on the Intervention in the Aspect of Self-esteem

Item	Mean
I am more confident to speak English in speaking games.	4.40
I am not afraid to make mistake in speaking games.	3.80
I have my friends to work with to speak English in speaking games.	4.60

Furthermore, since the learning sesssions were games, they were not afraid to speak freely and were more confident, hence were not concerned about committing errors (*Participant A, J, K, L & T)*. Subsequently, four out of 20 learners thought that the games also transformed the learning environment into a more informal setting which gave them the perception that making mistakes during speech delivery was considered acceptable as it was the nature of speaking (Participant *K, L, O & I*).

Research Question 3: How does GBL improve the learning environment in speaking class?

Table 4 shows the participants' perception of the learning environment. Table 4 indicated that GBL makes speaking lesson more interesting than ordinary class (*M*=4.20). They did not feel threatened (*M*=1.50), distracted (*M*=1.80) or being ignored (*M*=1.45) in the learning process. In fact, the majority (*M*=4.55) stated that learning took place when they were playing the games. This was also stated in group reflection when four out of five groups mentioned fun learning when asked about their views of using GBL in speaking lessons. According to Participant A, J, K, L and T, the lessons were entertaining because they were playing

with their friends. Besides, nine participants opined that the attributes of the game such as punishments and privileges turned the speaking practice into a more exciting and attractive lesson.

Table 4
Participants' Responses on the Intervention in the Aspect of Learning Environment

Item	Mean
I am distracted by teammates in the speaking games.	1.80
I feel threatened in the speaking games.	1.50
I am being ignored in the speaking games.	1.45
The speaking games are more interesting as compared to ordinary speaking lesson.	4.20
I am learning to speak while playing the game.	4.55

Participants also acknowledged that the use of GBL changed the learning atmosphere in the classroom. According to Participant R, there was no activity like the GBL in the textbook and speaking lessons were normally boring. They also perceived that the games were creative *(Participant I),* different *(Participant M)* and it made the learning easier to understand *(Participant C)* because it enlivened the atmosphere and spurred learning as it was not too stressful *(Participant O).*

DISCUSSION

The study sought to improve learners' vocabulary in speaking, motivation and classroom learning environment through the usage of GBL. The findings showed that GBL can be a feasible alternative in enhancing learners' speaking skill as it is capable of overcoming learners' speaking weaknesses. In the aspect of linguistics, as mentioned by almost all participants, vocabulary enrichment is what they benefitted the most. This is mainly because GBL provides a platform for cooperative learning where learners help each other in their speeches. This is in line with Darus and Endang (2022), and Balakrishna (2023) who found that GBL allows competent learners to assist those who are weak which provides a meaningful and memorable learning experience.

Besides that, the findings also suggest that learners' confidence issues can be resolved through GBL. Since GBL encourages cooperative learning and reduces their fear of making errors, learners tend to view the speaking practice more as a form of self-improvement than an assessment. Furthermore, there is a tendency for learners to emulate their friend's confidence during the practice, leading them to focus more on delivering their ideas effectively and less on their mistakes. Such imitation of speech also occurs in the research conducted by Heri and Haerazi (2021). The informal learning environment derived from GBL is also changing learners' perspective about speaking lessons (where mistakes are allowed), thus, reducing their speaking hesitation. This is in line with the view from Diana and Renda (2022) that GBL lowers learners' anxiety as they learn in a more relaxing learning environment.

The research also confirms Alfi et al. (2022) perspective that GBL is capable of transforming uninteresting learning materials to be interesting while maintaining its learning objective. As portrayed in the findings, most of the learners viewed the games as fun, interesting and different from their ordinary mundane speaking lessons which suggests that learners appreciate and value GBL more than their traditional classroom learning. Such learning does not only enliven the classroom atmosphere but also increases their motivation to learn because the environment is not stressful. This is in line with Wong and Md Yunus's (2022) findings that learners' participation is enhanced when they are in a stress-free environment as it encourages them to speak in class.

CONCLUSION

The study was conducted to find an alternative to enhance learners' speaking through the usage of GBL. From the findings, it can be concluded that learners appreciate and value GBL as compared to ordinary speaking lessons as GBL brings some positive implications on both cognitive and affective development. As depicted in the findings, GBL is capable of enriching learners' vocabulary, boosting their self-confidence and providing stress-free learning environment, which are invaluable in reducing learners' speaking anxiety, thus proposing the possibility of embedding GBL in English learning to obtain efficacious speaking lesson.

SUGGESTIONS FOR FUTURE RESEARCH

Despite the seeming success of this action research study, there were some limitations. As this study only involves Form 4 learners with moderate level of proficiency, making a conclusion to utilise GBL to enhance learners' speaking may not be true in other circumstances. Therefore, for future research, it is highly recommended for GBL to be carried out on different target groups, for instance learners with low proficiency who possess similar learning issues to determine if the approach is congenial for their learning. Findings would be valuable to provide educators with insights on the best approach for conducting speaking lessons.

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